The Journal of the American Medical Association

Published Under the Auspices of the Board of Trustees

VOL. 76, NO. 21 — CHICAGO, ILLINOIS — MAY 21, 1921

ACUTE RHEUMATIC FEVER AND ITS VARIANTS IN CHILDHOOD AND ADOLESCENCE *

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PHILADELPHIA

Rheumatism is not, like typhoid fever or diphtheria, a unit disease manifesting itself in a more or less uniform manner. The rheumatic chain, as Osler called it, has a number of apparently dissimilar links, the connection of which with rheumatic fever is not always easily established. Yet we have abundant evidence that such connection exists. We may name, among these links, chorea, tonsillitis, rheumatic skin affections, especially the rheumatic nodules, cerebral rheumatism, acute rheumatic polyarthritis and rheumatic carditis.

At first sight the multiplicity and diversity of these lesions might argue against their interrelation, and might strengthen the view of those who maintain that rheumatism is not a specific clinical entity. To this I answer that syphilis is no less protean: we have the chancre, the cutaneous secondary and tertiary lesions, the visceral gummas, cerebrospinal syphilis and the cerebrospinal scleroses. While the close connection of these widely differing processes was long suspected, the actual demonstration of their relationship was brought only through Schaudinn's discovery of *Spirochaeta pallida*. If I venture to make the statement that the corresponding proof is lacking in the case of rheumatic affections, it is tantamount to saying that I am not a believer in the etiologic significance of the organisms hitherto found. The streptococcus has, of course, been blamed (of what is it not accused?) and at times has been isolated from the heart valves, from the tonsils, etc.

In 1914, Rosenow, of the Mayo Clinic, isolated from the joints, blood and tonsils in rheumatic cases three different strains of diplostreptococci and cultivated them anaerobically. Two of them caused in rabbits arthritis, pericarditis and endocarditis, while the third caused myositis and myocarditis in addition. Rosenow believes that nonvirulent streptococci acquire in the tonsils new specific properties which make them capable of giving rise to rheumatic fever. Many facts, however, militate against the primary etiologic importance of the streptococcus although, just as in scarlet fever, influenza and smallpox, it may become an important secondary invader. The absence of suppuration, the therapeutic action of the salicylates, the usually sterile character of the joint fluid and the blood make it highly improbable that in the streptococcus we have the essence of rheumatic diseases. Furthermore, although it is possible to produce myocardial nodules by injection of *Streptococcus viridans* into rabbits, as Cecil [1] has shown, these are not identical with Aschoff's nodules, of which I shall speak later.

Regarding Poynton and Paine's diplococcus, little need be said. Even though Poynton on one occasion isolated it from the pericardial fluid, too many others have been unsuccessful. Moreover, it has been found in arthritic conditions that do not belong to the rheumatic group. Recently Chantemesse, Matruchot and Grimberg [2] isolated a small bacillus, called by them *Mycobacillus synovialis*, from the endocardial lesions and from the pia mater and the cerebral cortex, in a case of acute articular rheumatism. Cultures, when inoculated into rabbits, gave rise to arthritis and endocarditis. One cannot accept this bacillus as the cause of acute rheumatic fever on such slender and unsupported evidence. The bacillus of Lustgarten and the Sanarelli bacillus, the one acclaimed as the cause of syphilis, the other as the cause of yellow fever, are still remembered by skeptical minds. The matter thus stands as in scarlet fever, measles and smallpox: We are convinced that these are infectious diseases, but do not know the contagium vivum that produces them. Perhaps we shall have to look in rheumatic fever for a filtrable virus or an ultramicroscopic organism which Noguchi or, shall I say, some Noguchi will eventually discover.

Strange to say, we have no absolutely characteristic macroscopic postmortem finding in acute articular rheumatism; [3] but since Aschoff in 1904 described his submiliary nodules of the heart muscle, we have what seems to be a trustworthy histologic finding, at least in the acute disease. In cases of long standing, these nodules undergo fibroid organization, and then are no longer characteristic.

If the streptococcus or Poynton and Paine's diplococcus were the cause of rheumatism, one should be able to find these organisms in the fresh nodules; but, so far as I know, this has not been accomplished. Streptococci have been found in rare instances in the valvular vegetations.

Much evidence has been accumulated in proof of the contention, early brought forward by the late F. A. Packard, that the tonsils are the infection atrium of rheumatic fever and its variants. They are probably not the only one. Furthermore, it is a plausible assump-

* Read before the Philadelphia County Medical Society, Feb. 23, 1921.

1. Cecil: J. Exper. Med. 24:739 (Dec.) 1916.
2. Chantemesse, Matruchot and Grimberg: Compt. rend. Acad. d. Sc. 164:652, 1917.
3. It is true, the fine, grayish-pink verrilike vegetations along the line of closure of the valve are seldom found in endocarditis of nonrheumatic origin.

tion that the rheumatic virus, when once introduced, may survive in the tonsils, the pericardium and the valvular endocardium after the primary attack is over, just as the spirochete of syphilis and the plasmodium of malaria may long survive in their hiding places. In that way we may account for relapses, although I would not of course deny the possibility of reinfection from without. In any event, one attack does not confer immunity: rather does it increase susceptibility to the disease.

For the frequent recurrence of rheumatic joint affections, the work of Faber[4] gives a rather interesting explanation. Faber injected the joints of rabbits with killed cultures of streptococci, and found that when the rabbits were afterward inoculated, intravenously or subcutaneously, with minimal doses of living streptococci, they would develop arthritis in the sensitized joints. It may be that relapsing arthritis in man is due to the effect of a virus on an homologously sensitized joint.

The rapid swelling of the joints as well as its prompt subsidence suggests the thought that the articular change is due to toxins rather than the micro-organisms themselves, a surmise strengthened by the sterility of the joint exudate. In many respects, acute articular rheumatism resembles serum sickness, the anaphylactic joint swelling that sometimes follows antitoxin and other serum injections.

Chorea and rheumatism are undoubtedly related. That the former does not respond to salicylates is not an argument of much moment. Witness tabes and cutaneous syphilis in their respective behavior to mercury or arsphenamin. An important observation was made by Thalheimer and Rothschild,[5] who found Aschoff's nodules in the heart in three cases of chorea. Chorea rarely precedes, more often follows, rheumatism, but it may occur without preceding joint involvement. The same cutaneous lesions have been found in chorea as in articular rheumatism;[6] that chorea leads to endocarditis is of course well known.

No statistics are available regarding the frequency of rheumatic fever and chorea, for these diseases are not reportable and are most often treated at home. The death rate for the last five years in Philadelphia for acute articular rheumatism, which includes rheumatic fever, is 83 in 1916, 111 in 1917, 64 in 1918, 78 in 1919 and 104 in 1920, or from 3.59 to 6.33 per hundred thousand. That for chorea is remarkably uniform, 5 for the years 1916 and 1918, and 7 for each of the years 1917, 1919 and 1920. This low death rate from chorea is a sign that chorea is probably not a very common disease in Philadelphia. The greatest mortality from articular rheumatism is in the age period from 5 to 15.

It is unnecessary to describe a typical case of acute rheumatic fever. The polyarthritis, intensely painful and shifting, involving the larger joints and the fingers, is a well known picture. In adults the disease seems to spend itself chiefly on the joints, while in childhood it has a much greater tendency to attack the heart. The blood shows decided changes, a secondary anemia quickly develops; the leukocytes are considerably increased, up to 14,000 and 16,000, or even more. Blood culture as a rule is sterile. When cardiac complications have occurred, one may find, especially in the later stages, *Streptococcus viridans* in the blood.

4. Faber: J. Exper. Med. 20: 615, 1915.
5. Thalheimer and Rothschild: J. Exper. Med. 20: 417, 1914.
6. Rose, M. H.: M. Clinics N. America 2: 201 (July) 1918.

Recovery is the rule in the ordinary polyarthritis, but recurrences are frequent.

THE DISEASE IN CHILDHOOD

In childhood, the disease presents certain important peculiarities:

1. Though occurring in children of all ages—even intra-uterine infection has been described—it is most frequent between the ages of 5 and 15 years, and is especially common about the period of puberty. It seems to affect girls a little more frequently than boys, which is interesting in view of the fact that in the adult the male sex greatly predominates over the female.

2. The joint involvement is often slight; indeed, so slight as to be easily overlooked. The so-called growing pains are frequently rheumatic signals.

3. Involvement of the heart is very common in children. Neither its occurrence nor its intensity bears any definite relation to the severity of the joint involvement. Trivial joint involvement may be followed by severe cardiac damage.

4. Tonsillitis, follicular tonsillitis, is a frequent preoccurrence in the acute attack, and is a common antecedent in the patient's history.

5. Chorea is a sequel in a number of cases.

6. Skin manifestations are more common in children than in adults.

7. Cerebral rheumatism, characterized by delirium and hyperpyrexia, is rarely seen in childhood, but is a complication of the disease in adults.

THE HEART

I can perhaps save time and give precision to what I have to say if I make my statements somewhat dogmatically:

1. Cardiac involvement may occur within twenty-four hours after the beginning of the disease. More frequently it is discovered through the hearing of a definite murmur, three or four days after the onset of the joint trouble.

2. Only a careful routine examination of the heart will permit early discovery of cardiac lesions.

3. The textbooks hold that mitral endocarditis is much more common than any other valvular inflammation. My experience is not entirely in accord with this. Aortic involvement, while perhaps not so common as mitral, is nevertheless much more frequent than is indicated in textbooks. It is often overlooked because, believing the mitral valve area to be the danger zone, some listen only there and not at the base.

4. Certain clinicians contend that the mitral murmur of acute rheumatism is not endocarditic, but is due to dilatation and myocardial weakness. Against this view I feel inclined to protest. I have heard the mitral murmur as already indicated within twenty-four hours after the first joint pain appeared, before there could have been any marked myocardial weakening. Secondly, one does not hear the mitral murmur very often in other severe acute infections, such as typhoid fever and pneumonia.

5. Mitral endocarditis is capable of complete recovery; at any rate, all auditory evidence may disappear. It is, however, possible that mitral stenosis is a delayed result of a mild and apparently evanescent lesion. It is this tendency on the part of the systolic murmur to disappear that has led some observers to doubt its inflammatory origin.

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6. Aortic lesions, probably on account of the greater strain on the delicate valve leaflets, very rarely disappear. Hence I dread the finding of a diastolic murmur at the aortic cartilage or at the left border of the upper sternum.[7]

7. Double valve involvement rarely occurs in the first attack. It usually means at least two separate seizures.

8. Pericarditis is extremely common, and may occur after one of the valves has been attacked or without such prior involvement. It is often overlooked for several days, the reasons being that:

(*a*) It is usually entirely painless. This is one of the most remarkable phenomena of clinical medicine, and is difficult to explain. The friction may be so pronounced as to be palpable, and yet the patient may have scarcely any pain in the precordial region. Sometimes when he takes a very deep breath a slight pain appears.

(*b*) It does not always produce a to-and-fro friction sound at the beginning, but rather a rumble resembling a valvular murmur. The true nature of the sound may, however, be recognized by its superficial character and by its location away from a valve point toward the base of the heart, over the upper sternum. Pericarditis nearly always causes an access of fever and frequently an increase in the respiration rate. To the latter sign I am inclined to attach a great deal of importance. Not alone in rheumatic fever, but also in pneumonia I have seen a decided increase in the respiration rate coincide with the onset of pericarditis. On several occasions I have been able to surmise the existence of the complication by a study of the temperature chart.

In severe cases of pericarditis, there is usually an associated pleuropericarditis and mediastinitis which may be detected by studying the influence of respiration on the friction sound. The pain in the back of which some patients complain may be due to inflammation of the posterior wall of the pericardium or of the tissues in its proximity.

A curious feature in pericarditis, one that may cause error in diagnosis, is the presence in many cases of the signs of pneumonic consolidation of the left lung. Distinct impairment on percussion, bronchial breathing and bronchophony suggest the presence of pneumonia; but usually there is no pneumonia. I believe that the deceptive signs are produced through compression of the left lung by the heart. For the production of this condition, which I would call *pericarditic pseudopneumonia*, a large amount of fluid is not necessary. I have seen it when there was only a little fluid, but a great deal of fibrous exudate and an enlarged heart.

The myocardium probably never escapes entirely in acute rheumatic fever, certainly not in children. Usually a muffling of the heart sounds, perhaps due to edema of the valve leaflets as well as to weakening of the heart muscle, can be demonstrated. Now that we know of the formation of the nodules of Aschoff, the clinical behavior of the heart is more readily understood.

English writers have coined the useful word carditis (or pancarditis) to designate the widespread harm that rheumatic fever does to the heart and to indicate in a single word involvement of the myocardium, pericardium and endocardium.

Pleurisy with effusion is not rare in severe cases of rheumatic fever in which the heart is involved. If on the left side, it complicates the diagnosis of pericardial effusion. It is not rarely right-sided, and in either case adds greatly to the embarrassment of the respiration.

THE RHEUMATIC SKIN AFFECTIONS

The most characteristic of rheumatic skin affections is the so-called rheumatic nodule, which histologically resembles the miliary nodule in the heart muscle.[8] Usually there are but few of these nodules, chiefly about the elbows, the backs of the wrists, near the ankles, and over the buttocks. At times the number is enormous, as in a case that I saw with Dr. Zall of this city.

The patient was a girl, aged 15 years, with well marked aortic and mitral insufficiency. Closely aggregated over the buttocks were innumerable reddish papules, pea size and larger, with very little intervening normal tissue. They were movable, not tender, and gave the buttocks a pebbly feel and appearance. Nodules of smaller size were present on the legs. In addition, there were scars of the same size as the papules scattered over the arms and thighs. Dr. Zall assured me that these had all been papules originally. When I saw the child again four months later, every trace of nodules and scars had disappeared.

As a general rule, the rheumatic nodules occur in cases with marked cardiac involvement.

Various types of nodular or papular erythema may be encountered in rheumatic cases and may be properly considered as rheumatic in origin.[9] The papules or nodules are usually discrete, violaceous, shiny, raised, hard and somewhat tender. They are most profuse about the knees, elbows and buttocks.

PURPURA

A good deal has been written about so-called rheumatic purpura. In many instances the condition is not rheumatic at all, being due to hemophilia, or to toxic substances, such as drugs. Still others are associated with bleeding into the intestinal tract and severe cramplike pains in the abdomen, and are examples of the erythema group of Osler. However, after all these nonrheumatic types are deducted, there still remains a small group of purpura of true rheumatic origin.

DIAGNOSIS

The subject of diagnosis is an enormous field in itself, for there are few conditions in which more errors are possible than in acute inflammation of the joints. One should always be skeptical when one joint alone is involved. In adults, this is practically never acute articular rheumatism. In children it may be; but if the pain persists and is sharply localized in one joint or in its neighborhood, the probabilities are that the condition is an osteomyelitis, a tuberculous process, or, in infants, Barlow's disease or scurvy. The early occurrence of endocarditis or pericarditis is a point in favor of the rheumatic nature of the trouble.

The acute stages of chronic polyarthritis, arthritis deformans, or infectious arthritis may resemble acute articular rheumatism. However, in the former the small joints are predominantly involved, especially those that are rarely attacked by articular rheumatism, as, for example, the sternoclavicular, the temporomaxillary and the vertebral joints. The inflammation does not shift so rapidly from joint to joint, and heart complications are exceedingly rare. Gonorrheal rheumatism in its acute stages may be mistaken for acute articular

7. Since writing this I have examined a girl in whom I found unmistakable signs of aortic regurgitation five years ago, during an attack of acute articular rheumatism. To my amazement, every trace of valvular defect has disappeared.

8. Cooms: J. Path. & Bacteriol. 18, 1910-1911.

9. Bass (Footnote 6). Schloss: Am. J. M. Sc. 140, 1910.

rheumatism; but the history, the presence of the gonococcus in the prostatic secretion, the inefficacy of the salicylates, and the complement fixation and precipitin tests assist in the diagnosis. Endocardial involvement is quite common in gonorrheal arthritis; pericardial, while it occurs, is rare.

TREATMENT

I shall not discuss the mooted question of the specificity of the salicylates. The very fact that there is such a mooted question makes it probable that they are not true specifics. However, they are the best we have at the present time. The dose must be large—from 6 to 10 gm. a day (90 to 150 grains)—and should be given in divided doses for the first twenty-four hours, so as to get as much salicylate as possible into the body. A large part of the salicylic acid, more than half, is quickly converted into almost inert salicyluric acid. Hence the advisability of administering the drug at short intervals. The choice of preparation is not very important; I prefer the sodium salicylate combined with an equal amount of sodium bicarbonate in a simple vehicle. After twenty-four hours the dose may be lessened or the interval increased. If the case responds at all, the fever and pain will subside in the course of forty-eight hours. Unfortunately, a large proportion of cases do not respond so readily to the intensive treatment with salicylates. I have seldom found when the sodium salt failed that any other preparation possessed any value, although one may try oil of gaultheria, acetylsalicylic acid, or any one of the many synthetic preparations on the market. Contrary to the opinion of some clinicians, I have not observed any difference between the synthetic and the natural salicylic acid.

In some instances the pain is so excruciating that morphin must be given.

Local measures are of value. The joints may be wrapped in cotton held on with a loose bandage, or soothing lotions, such as lead water and laudanum, or saturated solution of magnesium sulphate; or an oil of gaultheria ointment may be applied. Baking of the joints is sometimes useful. Much comfort is often obtained from putting a splint on the hands when the wrists and fingers are greatly swollen.

Water should be given in abundance, either plain or as lemonade or orangeade. Sometimes it is difficult to get children to take the proper amount of fluid, and it may be necessary to administer it by bowel. The food should be that of all febrile diseases: milk, buttermilk, cereals, junket, chicken broth, cocoa, etc. It is well to have the patient either lying between thin blankets or wearing thin flannel pajamas or a flannel night dress. The less the patient is handled while the joint swelling lasts, the better.

TREATMENT BY VACCINES AND SERUMS

Until we have definitely isolated the cause of rheumatic fever, the use of vaccines and serums is purely empiric. That does not of necessity condemn their employment. In rare instances the use of a stock vaccine in an obstinate case seems to prove beneficial; perhaps it is the foreign protein rather than any specific substance that brings about the improvement.

PROPHYLAXIS

The patient who has had rheumatic fever should protect himself in every way against wetting and chills. He should wear proper underclothing and overclothing, should pay attention to the bowels and, if a child, should be subjected to a gradual hardening process. A change of climate, when the circumstances permit, is at times of the greatest value.

TONSILLECTOMY

If the tonsils were the only point of entrance, their removal might promise deliverance from further attacks. This is not the case, as has been pointed out by Crowe, Watkins and Rothholz.[10] However, recurrence is not very frequent, as it took place in only four out of twenty-five cases of acute rheumatic fever in which the tonsils had been removed. I am therefore of the opinion that their removal is justified, if they are diseased. The rheumatism may not recur, and the heart may be spared further damage. The tonsils should not be removed during an acute attack of rheumatic fever.

As for chorea, tonsillectomy offers much less assurance against recurrence. In twenty-three cases of chorea reported by Crowe, Watkins and Rothholz in which the tonsils and adenoids were removed, recurrence took place in eight. One patient who had never had chorea developed the disease after the removal of the tonsils.

I want to say a word about the after-care of cases of simple follicular tonsillitis. I believe the profession underestimates the importance of this disease—its great power of mischief. The patient should be kept in bed and should be watched for two or three days after the acute attack of the disease has subsided, and should have at least one thorough urine examination before discharge.

Can cardiac complications be prevented? The question is not easily answered. We can never know positively that they would have occurred in cases in which we believe we have prevented them. Nevertheless, every intelligent effort should be made in the direction of cardiac protection. The measures that suggest themselves are:

1. Prompt confinement to bed.
2. Prompt salicylization of the patient. There is little evidence that, given a definite heart lesion, the continued use of the salicylates does any good.
3. Careful daily auscultation of the heart.
4. The use of small blisters at the first sign of pronounced muffling of the heart tones or of a friction sound.
5. Long confinement to bed after subsidence of all acute phenomena.
6. In cases of pericardial effusion, embarrassing the action of the heart, aspiration.
7. Aspiration of the pleural sac even while fever is still present, if there is marked dyspnea.

CONCLUSION

It may be said that, of all the common diseases of childhood, those most to be dreaded are rheumatic fever and scarlet fever, for they are treacherous. While they do not often kill, they frequently maim for life. It is rather an opprobrium to the medical profession that it has not found the causes of these diseases and therefore is still powerless to attack them in a fundamental way. I hope it will not be long before we shall master them as we have mastered typhoid fever and smallpox.

1715 Spruce Street.

10. Crowe, S. J.; Watkins, S. S., and Rothholz, A. S.: Bull. Johns Hopkins Hosp. 28:1 (Jan.) 1917.

THE AUTO-URINE TEST FOR ACTIVE TUBERCULOSIS

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In May, 1919, Wildbolz[1] of the Island Hospital, Berne, Switzerland, described a test for active tuberculosis in any stage. While the principle of this test was not new, its efficiency, as reported by him and his co-workers in several later articles, has been so definitely shown as to attract considerable interest in Europe.

So far as is known, however, no efforts have been made in this country to compare results with his findings, although digests of his articles from the foreign literature have been quoted in several American journals. That such a test, if proved to be accurate, would be of great importance in the diagnosis of active tuberculosis, goes without saying.

Reactions obtained by the von Pirquet, Mantoux or Stich tests indicate infection or latent tuberculosis, but do not define active disease, and only assist in upholding the contention that a large majority of civilized people have at some time during life been infected with tubercle bacilli. The difficulty in diagnosing active tuberculosis in children is not materially abated by positive tuberculin reactions, but such a test as described by Wildbolz could here assume a most important rôle.

Since this sanatorium is for children suffering with tuberculosis, and in view of the obstacles that have confronted us in arriving at definite diagnoses of tuberculosis among our youthful patients, such possibilities as are contained in the auto-urine test theory have appealed to us mightily and have induced us to make an attempt toward proving or disproving its value and efficiency.

PRINCIPLES AND THEORIES OF THE AUTO-URINE TEST

As stated before, the biologic tuberculin reactions heretofore in use indicate little or nothing of the stage of the disease, of its development, of the retrogression of the process or of its healing—in other words, of the activity of the disease.

These biologic tests announce through positive results only that a hypersusceptibility of the body against tuberculin exists, that is, at the time tuberculous antibodies are in circulation in the organism. But, since after infection has once existed the hypersusceptibility of the skin, if developed, is said to continue for a long time, the positive result of a tuberculin reaction proves only that infection has at some time occurred.

No interpretation or meaning attributed to reactions obtained by the use of present tuberculins can definitely determine a question of activity. We make this statement, fully recognizing the existence of the so-called sensitization reaction, but reserving the opinion that this criterion of activiy or nonactivity has not remained undisputed and has not received universal recognition.

The propounders of the auto-urine test theory believe it possible to demonstrate the activity of a tuberculous process through the proof of antigens in the human urine by means of an allergy reaction of the skin.

This theory is the product of the thought that when there is an active tuberculous process in the body there must be products of elimination and disintegration of and due to the tubercle bacilli. These products of active disintegration or antigens, or tuberculin-anti-tuberculins, as they are described by some, are thrown into and distributed by the blood stream, where a part of them are held and made harmless by the defensive mechanism of the body: the antibodies; and a part are removed from the organism by the secretory organs: the kidneys, the intestines, the liver, the skin, the lacteals, etc.

It follows that if the existence of these antigens can be proved, then will the activity of the tuberculous process be evident; for, unless there is an active and disintegrating infected focus in the body, the formation and elimination of antigens is not comprehensible or conceivable.

The method by which the existence of these antigens is demonstrated and proved is the auto-urine reaction, depending, however, on allergy or organic hypersusceptibility of the skin. The demonstration of the presence or absence of antigens is accomplished by injecting into the skin of the urinator his own urine, which has undergone certain modifications. It is, of course, generally understood that many patients who have demonstrable active tuberculosis have skin anergy, or organic resistance, that is, do not react to the injection of tuberculins. The same is also true in the auto-urine reaction. Should the skin of the patient be anergic, then his urine is injected into another known to have skin allergy, or organic hypersusceptibility to tuberculins.

So long as there is a focus of active tuberculosis anywhere in the body, then so long will there be antigens excreted with the urine which, if injected into the

TABLE 1.—ALLERGIC CASES WITH POSITIVE SPUTUM*

Case No.	Age	Ill	Clinical Description	Sputum	Mantoux	Auto-Urine
1	15 yr.	6 mo.	Both uppers active; febrile; tachycardia	Pos.	Pos.	Pos.
12	11 yr.	8 mo.	Infiltration both uppers; intermittently febrile; loss of weight; night sweats	Pos.	Pos.	Pos.
13	20 yr.	4 yr.	Extensive involvement left lung with infiltration right upper; nontoxic; nonfebrile	Pos.	Pos.	Pos.
14	12 yr.	4 mo.	Infiltration right upper lobe; tracheobronchial adenitis; sputum once positive, now negative; nonfebrile	Pos.	Pos.	Pos.
16	40 yr.	4 yr.	Tuberculous elbow, healed; dorsal Pott's, clinically inactive; nonfebrile; nontoxic; second stage	Pos.	Pos.	Pos.
18	37 yr.	2½ yr.	Nonprogressive signs of tuberculosis in left lung; nonfebrile; fair general condition	Pos.	Pos.	Pos.
25	14 yr.	9 mo.	Admitted 5 months previously with beginning involvement both uppers, and positive sputum; has been negative for 4 months; for last 4 months afebrile, nontoxic and progressively improving and classed as apparently arrested	Pos.	Pos.	Neg.

*These seven allergic cases had presented at one time or another positive sputum, all but one recently. Six of this seven were classed as progressive cases; the seventh was termed as apparently arrested. All six positive cases reacted positively to the auto-urine test, while the seventh was negative.

1. Wildbolz: Biologic Test for Active Tuberculosis Focus in the Human Body by the Response to Intradermal Injection of Auto-Urine, Cor.-Bl. f. Schweiz. Aerzte 49:793 (May 31) 1919.

skin of a tuberculous urinator in sufficient concentration when his skin is allergic or hypersusceptible to tuberculin, will result in a similar reaction in the skin to that obtained by injecting tuberculin. Briefly, the tuberculin used for the skin reaction is furnished by the patient himself in his own urine.

If this reaction is positive, the assumption is that tuberculous antigens are in the urine, and that therefore an active tuberculous process exists in the body. If the urine contains no antigens, its injection affects the skin nonspecifically and exclusively, as would an injection of a solution of various urinary salts which, if not too highly concentrated, will not cause a reaction of itself.

In anergic patients the test is believed to be of great value; for, since a person may harbor an active focus of disease and yet react negatively to tuberculins, thus denying even infection, yet his urine if injected into a hypersusceptible or allergic individual will react positively, thus defining an active lesion which may be impossible of clinical demonstration.

tend with the variations in concentration of the urine or with the highly diluted antigens occurring in the urine of those patients who have impaired renal function. The latter is an extremely important consideration; for in those patients whose renal activity is disturbed, the antigens in the urine, by reason of the impaired filtering powers of the kidneys, are highly diluted and almost impossible of demonstration but can be shown to exist in the blood, which is, of course, the ordinary source of these substances. There is also less liability to skin necrosis.

Although we have considered these points, the convenience of obtaining urine rather than serum from our young patients has convinced us that the auto-urine test is more practical at the present time for our uses; but we are now carrying through a series of the older patients with the autoserum test for a later report.

In preparing for the auto-urine test, the first consideration is a means whereby the antigens which are in the urine in a highly diluted state can be concentrated

TABLE 1.—ALLERGIC CASES WITH NEGATIVE SPUTUM*

Case No.	Age	Ill	Clinical Description	Sputum	Mantoux	Auto-Urine
2	7 yr.	15 mo.	Tuberculosis of spine, hip and cervical glands; extremely active	None	Pos.	Pos.
15	6 yr.	18 mo.	Tuberculosis of spine, hip and knee	None	Pos.	Pos.
17	44 yr.	3 yr.	No definite active lesion; recurring pleuritic attacks	Neg.	Pos.	Pos.
20	13 yr.	3 mo.	Infiltration of apexes; febrile; toxic	Neg.	Pos.	Pos.
22	14 yr.	3½ yr.	Tuberculosis of right hip with discharging sinuses	None	Pos.	Pos.
27	9 yr.	18 mo.	Infiltration, right upper; nonfebrile; nontoxic	Neg.	Pos.	Pos.
28	13 yr.	18 mo.	Moderately active lesion, right upper; nonfebrile	Neg.	Pos.	Pos.
29	14 yr.	3 mo.	Admitted with infiltration, left upper; now improved; signs retrogressive	Neg.	Pos.	Neg.
33	14 yr.	6 mo.	Infiltration, both uppers on admission; nonfebrile; now fibrotic	Neg.	Pos.	Pos.
38	13 yr.	3 yr.	Involvement, left upper; nonfebrile; nontoxic	Neg.	Pos.	Pos.
39	19 yr.	4½ yr.	Nonfebrile; slightly progressive; old lesion both uppers	Neg.	Pos.	Pos.
40	11 yr.	3 yr.	Nonprogressive; nonfebrile; healed lesion, right upper	Neg.	Pos.	Neg.
42	25 yr.	4 yr.	Alternately progressive lesion, both uppers; nonfebrile	Neg.	Pos.	Pos.
43	15 yr.	5 yr.	Clinically inactive lesion, right upper; nonfebrile	Neg.	Pos.	Pos.
50	6 yr.	18 mo.	On admission submaxillary adenitis; loss of motor coordination, lower extremities; thickened pleura; old empyema, left base	None	Pos.	Pos.
51	8 yr.	6 mo.	Heart and lungs negative; splenomegaly of unknown etiology; granular inspiration, inner border right scapula	Neg.	Pos.	Pos.
58	11 yr.	1 yr	Clinically negative for tuberculosis; lungs negative; mitral regurgitation	Neg.	Pos.	Neg.
67	11 yr.	2 yr.	Healed cervical adenitis; tracheobronchial adenitis; mitral regurgitation; four plus Wassermann; not believed to be now clinically tuberculous	Neg.	Pos.	Neg.
31	28 yr.	No	Normal individual; no illness	None	Pos.	Neg.
46	29 yr.	No	Normal individual; no illness	None	Pos.	Neg.
61	14 yr.	6 yr.	Old infiltration of apexes, healed; healed cervical and inguinal adenitis	Neg.	Pos.	Neg.
60	13 yr.	1½ yr.	Healed cervical adenitis; lungs negative	Neg.	Pos.	Neg.
57	15 yr.	1½ yr.	Lungs negative; old pyogenic osteomyelitis of tibia; intermittently discharging sinus, left thigh; not considered clinically tuberculous	Neg.	Pos.	Neg.
59	13 yr.	2 yr.	Active involvement, both upper lobes; nonfebrile but progressive	Neg.	Pos.	Pos.

* Results in twenty-four allergic cases in which the sputum was negative. Five of this twenty-four were classed as arrested; two, nontuberculous, and two, no disease, while the remaining fifteen all presented definite signs of tuberculosis. All except the first nine reacted positively to the auto-urine test.

The principles of these several theories and their development as facts are supported by findings in about 300 cases reported by Wildbolz,[1] Lanz [2] and Imhof.[3] Offenbacher [4] and Miche [5] do not altogether agree with the findings of the former three, but a study of the technic used by these two investigators reveals to some extent methods which appear to be somewhat dissimilar to those of Wildbolz, and may account for the disparity in results.

Lanz, working on the same line of thought, has presented the autoserum test and reports of more than 100 cases. With several minor modifications, the technic is the same as that of the auto-urine test; but he believes that this test is an improvement over the auto-urine reaction, since with serum one does not have to con-

2. Lanz, W.: Research Concerning the Auto-Urine Reaction of Professor Wildbolz, Schweiz. med. Wchnschr., April 22, 1920.

3. Imhof, O.: In regard to the Wildbolz Auto-Urine and Auto-Serum Reaction for the Proof of an Active Tuberculous Focus, Schweiz. med. Wchnschr. 50:1033 (Nov. 11) 1920.

4. Offenbacher, K.: The Urine Test for Tuberculosis, Ztschr. f. Tuberk. 32:355 (Sept.) 1920.

5. Miche, F.: Intradermal Urine Test for Tuberculosis, Rev. méd. de la Suisse Rom. 39:567 (Dec.) 1919.

to a sufficiently condensed volume as to permit demonstration. It has been shown that concentrating the urine and evaporating it at the ordinary boiling point destroys these delicate substances. Therefore the urine must be evaporated at a sufficiently low temperature to avoid destruction of the antigens; and since this can be done accurately only by removing atmospheric pressure, the urine is boiled and evaporated in vacuo at a temperature not exceeding 55 C.

Water will boil at 37.8 C. in a container in which there is a vacuum of 28 inches, and at 52.2 C. with a vacuum of 25.85 inches. Therefore the urine can be reduced in volume and the antigens concentrated sufficiently by evaporating the fluid in a vacuum of from 26 to 28 inches without exceeding a temperature of 55 C. and without destroying the antigen content. So long as the vacuum remains above 26 inches the temperature in vacuo cannot rise above 55 C., regardless of outside heat.

METHODS EMPLOYED

One hundred and fifty cubic centimeters of morning urine were evaporated to a tenth of the volume or 15 c.c. in vacuo

(never at a temperature greater than 50 C.). The apparatus used for obtaining a vacuum was an ordinary water filter or vacuum pump. The urine was placed in a 500 c.c. distilling flask with side arm, to which was attached high pressure tubing extending to a condensing bottle placed between the flask and the vacuum pump. A rubber stopper perforated for and containing a Centigrade thermometer was placed in the neck of the flask. Inserted into the vacuum line past the condensing bottle was a vacuum gage and a capillary tube for controlling the vacuum.

The vacuum pump was attached to a water bib, and the pressure of the water flowing through this faucet was high, else sufficient vacuum could not be established and maintained.

When a vacuum of 28 inches had been developed and not before, as evidenced by the gage, the flask was immersed in a water bath, the temperature of which was above 70 C. If the flask was immersed in the water bath before that amount of vacuum was obtained, the temperature of course exceeded 55 C. and the possibility of destruction of the antigens was incurred. The urine boiled and evaporated rapidly to the required 15 c.c., which was measured by placing the tip of the inserted thermometer in the stopper in such a manner as barely to clear that desired quantity. If the vacuum at any time during the concentration began to drop below 27.5 inches, the flask was immediately removed from the water bath, so as to prevent a rise of temperature. With the vacuum reestablished to the required measurement, slight agitation would induce the resumption of boiling, after which it was replaced in the water bath. The average length of time required for the necessary concentration was about twenty minutes.

When the urine was concentrated to one tenth of its volume, the flask was clamped off and air allowed to enter gradually. The concentrated fluid was then placed in a sterile container and allowed to stand twenty-four hours, at the end of which time the greater portion of the irritating urinary salts was precipitated. These were removed by passing the urine through a sterile filter paper. Wildbolz advocates impregnating this filter paper with 2 per cent. phenol; and while the object of this was not readily comprehended, we followed this technic.

A minute quantity, about 0.1 c.c., was then injected intracutaneously on the anterior portion of the forearm, according to the method of Mantoux with tuberculin and of Schick with diphtheria toxin. A very fine needle was used, making easy the formation of a small bleb with the fluid. This bleb persisted for a short time, as did a slight burning sensation. In no case did we observe any systemic effects whatsoever, the entire reaction being manifested by a local infiltration of the tissues at the point of injection which developed within from eighteen to forty-eight hours after introduction of the fluid. The size of the infiltration varied from about 4 to 10 mm., 5 mm. being about the average. In but few of the cases was there any visible manifestation, the reactions being read with the finger rather than the eye—in marked contradistinction to the ordinary tuberculin reactions.

In every case a control urine was injected at the same time, in the same quantity and in the same manner. This control urine was made from urine of an allergic nontuberculous individual who did not react to his own urine. The control urine injection was of great value in estimating the amount of infiltration about the site of the auto-urine injection.

TABLE 3.—ANERGIC CASES WITH POSITIVE SPUTUM*

No.	Age	Ill	Clinical Description	Sputum	Mantoux	Auto-Urine	Injection in Allergic Individual	Result
55	49 yr.	3 yr.	Tuberculous laryngitis; fistula in ano; moderately active lesion, both uppers; now nonfebrile and improving	Pos.	Neg.	Neg.	13	Pos.
58	14 yr.	6 mo.	Infiltration, right upper, active; left apex inactive; tracheobronchial adenitis; afebrile; nontoxic	Pos.	Neg.	Neg.	16	Pos.
48	41 yr.	6 yr.	Nonfebrile; nontoxic; slightly active lesion, both uppers; beginning fibrosis, right apex	Pos.	Neg.	Neg.	17	Pos.
45	39 yr.	4½ yr.	Moderately active involvement, both upper lobes; dorsal Pott's, slowly progressive; markedly impaired renal function; autoserum in this case resulted positively	Pos.	Neg.	Neg.	22	Neg.
62	18 yr.	2 yr.	Moderately active lesion, right upper; nonfebrile; nontoxic.....	Pos.	Neg.	Neg.	29	Pos.
54	14 yr.	4 mo.	Infiltration of both apexes; slightly febrile; slightly toxic.....	Pos.	Neg.	Neg.	27	Pos.

* Results in six positive sputum anergic cases or patients who did not react to 1:10,000 solution of tuberculin administered by the method of Mantoux. All were negative when their urine was injected into their own skins; but when it was injected into allergic persons or known reactors, all were positive save one. This exception was a man, aged 59 years, with markedly impaired renal function. An autoserum test in his case resulted positively.

To determine definitely whether or not the patient was allergic or hypersusceptible to tuberculin, a Mantoux test was also made simultaneously with the two urine injections. The von Pirquet test was used in the first few cases, but was discarded in favor of the Mantoux, since it was believed that the latter was more reliable.

RESULTS

A slight skin necrosis was observed in five cases, but persisted for only a short time, and, it is believed, was due not so much to the urinary salts as to injections too superficially made.

TABLE 4.—ANERGIC CASES WITH NEGATIVE SPUTUM*

No.	Age	Ill	Clinical Description	Sputum	Mantoux	Auto-Urine	Injection in Allergic Individual	Result
49	10 yr.	Indef.	No definite signs of tuberculosis except granular breathing, left upper, and poor nutrition	Neg.	Neg.	Neg.	20	Neg.
52	5 yr.	4 mo.	Roentgen-ray diagnosis lymphatic tuberculosis; tentatively diagnosed Banti's disease; tracheobronchial adenitis	Neg.	Neg.	Pos.	22	Pos.
63	18 yr.	4 mo.	Early involvement, left upper lobe; tracheobronchial adenitis....	Neg.	Neg.	Pos.	42	Pos.

* Findings in three cases that did not react to tuberculin and in which the sputum was negative. It is interesting to note that two of these cases showed positive results with the auto-urine reaction, in spite of this fact. Urine from these cases was also injected into allergic known reactors, with positive results in two cases and a negative reaction in the third. The third case was that of a boy, aged 10 years, with an indefinite history of loss of weight. Beyond granular breathing over the upper left lobe, no signs of involvement or other illness could be elicited.

In most of the cases in which a positive reaction was obtained, the infiltration persisted for about seventy-two hours.

The accompanying tables present the results we obtained in forty cases with the auto-urine reaction.

It was observed that all cases with bone involvement were allergic, and all reacted distinctly to the auto-urine test.

In none of the cases were there conflicting results. In every case in which there was definite allergy to tuberculin along with signs of activity, the auto-urine reaction was positive. And all of the anergic patients with positive signs gave definite reactions when their urine was injected into allergic individuals except in the one case mentioned above in which the renal impair-

ment induced us to use the auto-serum test, the result of which was positive.

Further, the negative reactions obtained in the allergic cases have only borne out the opinion that these individuals had no active tuberculosis and were accepted as favorable rather than as disparaging results.

Aside from this recapitulation of cases, we do not care to draw any conclusions or make any definite statements as to the value of the reaction, and we feel that this attitude will be readily comprehended in view of the small number of cases that we have completed, as compared with the several hundred reported by Wildbolz and his associates.

In conclusion, however, we do desire to call attention to the following statement, which we consider of exceptional interest, made by Lanz in his original article after he had observed the auto-urine and autoserum reactions in more than 300 cases:

> In all clinically positive cases of tuberculosis, both reactions give positive results. In all nontuberculous cases both reactions are negative. If the reaction turns out positive contrary to expectation, then there is positively an undemonstrable but still active tuberculous process in the body. The reactions are the finest diagnostic medium for the discovery of an active tuberculous focus.

IODIN IN THE CEREBROSPINAL FLUID

WITH SPECIAL REFERENCE TO IODID THERAPY

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The presence of iodin in the cerebrospinal fluid of normal individuals or of patients receiving iodids therapeutically has hitherto not been demonstrated. Catton,[1] in 1916, reported a series of tests in patients receiving from 15 to 45 grains of potassium iodid by mouth three times a day. He concluded that, regardless of the amount of iodin administered by mouth, no iodin or compounds of iodin can be found in the spinal fluid, and that either iodin compounds do not pass the ependymal cells of the choroid plexus in any measurable quantity, or such iodin as reaches the spinal fluid is very rapidly fixed in the tissues. These conclusions were based on a method less delicate than that devised by Kendall, which I have employed in this study. This method has enabled me to show that there is iodin in the normal cerebrospinal fluid, and that iodin is found in the fluid in increased amounts following its administration by mouth, by rectum and intravenously. A brief outline of Kendall's method is as follows:

> The material is placed in a nickel crucible and evaporated to dryness with sodium hydroxid. It is then fused with solid sodium hydroxid, with the addition of potassium nitrate to assist in the oxidation of the organic matter. The fused mass is poured on the crucible cover, and after cooling is dissolved in boiling water on a hot plate. The solution is transferred to a 500 c.c. Erlenmeyer flask and cooled. Five cubic centimeters of a 20 per cent. solution of sodium bisulphite and two drops of a 2 per cent. solution of methyl orange are added. Eighty-five per cent. phosphoric acid is added slowly, with constant shaking until the indicator turns pink. Then 5 c.c. of a 20 per cent. solution of phosphoric acid is added. This solution is made up to about 250 c.c.; and after a small piece of hard coal has been placed in it to prevent bumping, it is boiled for at least ten minutes, and then cooled. From five to ten drops of bromin are added, and the flask is shaken until the contents assume a definite yellowish color. It is again boiled for just five minutes after the solution becomes colorless. A small amount, from 1 to 2 mg., of salicylic acid is added and the solution cooled. Five cubic centimeters of a reduced 20 per cent. solution of phosphoric acid, and a few crystals of pure potassium iodid are added. The free iodin liberated is titrated with two hundredth normal sodium thiosulphate with starch as an indicator. For the numerous details of Kendall's method the reader is referred to his original articles.[2]

In Table 1 the results obtained with normal spinal fluid are recorded. From 5 to 10 c.c. of spinal fluid was withdrawn from each patient besides the ordinary amount for routine laboratory tests. A mixed spinal fluid from ten to twenty patients was used in each determination. Each patient was carefully questioned with regard to previous therapy, and specimens from those who admitted having had medication by mouth at any time during the preceding three or four months were rejected. Kendall and Richardson found the average iodin content of the blood to be 0.013 mg. per hundred cubic centimeters of blood. My figure of 0.018 for the same amount of spinal fluid is slightly higher (Table 1). This difference, 0.005 mg., is within the range of experimental error, and is equivalent to one drop of two hundredth normal sodium thiosulphate.

TABLE 1.—IODIN IN NORMAL SPINAL FLUID

Spinal Fluid, C.c.	Iodin, Mg. in 100 C.c. Spinal Fluid
100	0.008
100	0.022
100	0.019
75	0.024
100	0.019
100	0.018
100	0.020
100	0.021
100	0.019
Average	0.018

POTASSIUM IODID BY MOUTH

In Table 2 are recorded the results obtained after administration of potassium iodid by mouth. In all of the six determinations iodin was found. Necessarily, specimens of spinal fluid from individual cases were in much smaller amounts than 100 c.c. A faint trace was recorded in four cases, because in the final titration the amount of two hundredth normal sodium thiosulphate used was so small that, if computed on a scale of 100 c.c. of spinal fluid, the margin of error would be very great. In the other two cases, amounts of iodin sufficiently large to be correctly determined were found. These two determinations were made at two and three

TABLE 2.—IODIN IN SPINAL FLUID AFTER ORAL ADMINISTRATION OF POTASSIUM IODID

Spinal Fluid, C.c.	Potassium Iodid Three Times a Day	Iodin, Mg. in 100 C.c. Spinal Fluid
10	60 grains, last dose 3 hours before	Faint trace*
10	30 grains, last dose 12 hours before	Faint trace*
10	120 grains, last dose 2 hours before	Faint trace*
7	30 grains, last dose 2 hours before	0.357
15	30 grains, last dose 72 hours before	Faint trace*
15	70 grains, last dose 3 hours before	0.255

* Amount too small to be accurately titrated.

1. Catton, J. H.: Studies of the Spinal Fluid During Iodid Medication by Mouth, J. A. M. A. 67: 1369-1370 (Nov. 4) 1916.

2. Kendall, E. C.: The Determination of Iodine in the Presence of Other Halogens and Organic Matter, J. Am. Chem. Soc. 34: 894-909, 1912; The Determination of Iodine in Connection with Studies in Thyroid Activity, J. Biol. Chem. 19: 251-256, 1914; The Determination of Iodine in Connection with Studies in Thyroid Activity, ibid. 40: 149-159 (Aug.) 1920. Kendall, E. C. and Richardson, F. G.: Determination of Iodine in Blood and in Animal Tissues, ibid. 40: 161-170 (Aug.) 1920.

hour intervals, respectively, following the administration of the drug. Buchholtz,[3] in 1918, showed that the blood concentration of iodin after administration by mouth was highest from two to three hours after administration. The foregoing determinations suggest a parallelism between the concentration in the blood and the cerebrospinal fluid. Further study with larger dosages is now in progress.

POTASSIUM IODID BY RECTUM

Two determinations were made on patients receiving potassium iodid by rectum only. The results are recorded in Table 3. Both patients showed appreciable amounts of iodin in the spinal fluid, in the first case 1.808 mg. per hundred cubic centimers (100 times the normal), one hour after the last administration of the iodid, and in the second case 0.381 mg. per hundred cubic centimeters (twenty times the normal), twelve hours after the last administration.

TABLE 3.—IODIN IN SPINAL FLUID AFTER RECTAL ADMINISTRATION OF POTASSIUM IODID

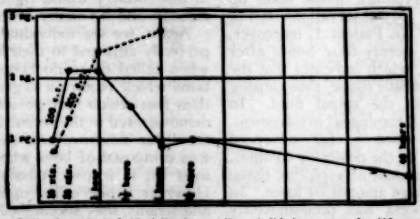
Spinal Fluid, C.c.	Potassium Iodid Three Times a Day	Iodin, Mg. 100 C.c. Spinal Fluid
5	125 grains, last dose 1 hour before.....	1.808
10	*250 grains, last dose 12 hours before.....	0.381

*Impossible to estimate exact amount retained; probably not more than 50 per cent.

SODIUM IODID INTRAVENOUSLY

The results obtained at varying intervals following an intravenous injection of 10 per cent. sodium iodid solution are shown in Table 4. Iodin in appreciable quantity appears in the spinal fluid within fifteen minutes after the intravenous injection of sodium iodid solution, as shown in the accompanying chart. With the injection of 100 c.c. of a 10 per cent. solution, the peak of the curve of increased iodin content of the spinal fluid is reached from one-half to one hour after injection. This amount, 2.133 mg. per hundred cubic centimeters, falls rapidly during the next hour, approximately to the same amount as that obtained for the fifteen minute interval. The decline in iodin content is then very gradual, until at the end of forty-eight hours 0.4 mg. per hundred cubic centimeters, or approximately twenty times the normal content, was found. With the injection of 200 c.c. of a 10 per cent. solution of sodium iodid, the iodin content of the spinal fluid at the end of the one hour interval is only 0.3 mg. per hundred cubic centimeters of spinal fluid, higher than with 100 c.c. However, instead of dropping at this point, the curve continues to rise, and at the two hour interval the amount of 2.784 mg. per hundred cubic centimeters of spinal fluid is reached. Of necessity, these determinations were made by observations on successive patients and not by successive punctures on a single patient.

With large dosages of sodium iodid intravenously, the question of a cumulative increase in the amount of the drug must be considered. Very little such increase was observed. One patient received daily intravenous injections of 100 c.c. of a 10 per cent. sodium iodid solution for ten days. On the eleventh day he received 200 c.c., and two hours later showed 3.180 mg. of iodin per hundred cubic centimeters of spinal fluid. This amount is approximately only 0.4 mg. higher than that recorded in Table 4 for the iodin content of the spinal fluid two hours after the intravenous injection of 200 c.c. of a 10 per cent. solution of sodium iodid in the normal patient.



Iodin in spinal fluid following sodium iodid intravenously (10 per cent. solution).

During the course of the study, several observations of especial interest were made which are summarized in Table 5:

Patient 1 presented a high grade meningeal involvement. His cerebrospinal fluid showed a positive Wassermann reaction, a positive Nonne reaction, and 306 lymphocytes. He was placed on 10 per cent. sodium iodid solution intravenously in amounts up to 450 c.c. daily (45 gm.). Twenty-four hours after the last injection the spinal fluid contained 4.851 of iodin per hundred cubic centimeters, which is approximately from fifteen to twenty times the amount (0.303 mg.) in 100 c.c. of spinal fluid of a normal patient twenty-four hours after the injection of 200 c.c. of sodium iodid solution (Table 4).

TABLE 4.—IODIN IN NORMAL SPINAL FLUID AFTER INTRAVENOUS ADMINISTRATION OF 10 PER CENT. SODIUM IODID SOLUTION

Spinal Fluid, C.c.	Sodium Iodid, C.c.	Hours Before Spinal Puncture	Iodin, Mg. 100 C.c. Spinal Fluid
15	100	½	1.00
15	100	½	2.133
15	100	1	2.133
15	100	1½	1.333
15	100	2	0.800
15	100	2½	1.033
10	100	48	0.400
15	200	½	0.804
15	200	½	1.341
10	200	1	2.414
15	200	2	2.784
6	200	24	0.303

TABLE 5.—SPECIAL OBSERVATIONS

Case	Diagnosis	Following 10 per Cent. Sodium Iodid	Amt. of Last Injection, C.c.	Hours Before Spinal Puncture	Iodin, Mg. 100 C.c. Spinal Fluid
1 (290329)	Neurosyphilis; marked meningeal involvement	200 to 400 c.c. daily for two weeks	450	24	4.851
2 (316584)	Neurosyphilis; advanced tabes dorsalis	100 c.c. daily for two weeks	100	3	4.800
3 (250805)	Neurosyphilis; marked meningeal involvement	100 to 250 c.c. daily for two weeks	250	½	42.300
4 (324098)	Neurosyphilis; advanced tabes dorsalis	None	200	3	4.377

Patient 2 had advanced tabes dorsalis with moderate meningeal involvement which had resisted all efforts at treatment. The Wassermann reaction on the cerebrospinal fluid was positive, the Nonne reaction was negative, and there was one lymphocyte per cubic millimeter. The patient had received 100 c.c. of 10 per cent. sodium iodid solution daily for two weeks. Three hours after the last injection he had 4.6 mg.

3. Buchholtz, J.: The Pharmacology of the Iodides, Ugesk. f. Læger. 80:139-146 (Jan. 24) 1918.

of iodin per hundred cubic centimeters of spinal fluid. As shown in Table 4, the normal amount would have been about 1.0 mg. per hundred cubic centimeters.

Patient 3 had an even more marked meningeal syphilis. In spite of all treatment, the cell count on the spinal fluid varied from 149 lymphocytes at the time of examination to 110 lymphocytes and 306 polymorphonuclears at the time of the test. He had received daily injections of from 100 to 250 c.c. of the sodium iodid solution. His spinal fluid contained 42.3 mg. of iodin per hundred cubic centimeters. This amount is about thirty times more than would be expected under similar conditions in a patient without evidence of neurosyphilis.

Patient 4 presented a well advanced tabes dorsalis with very slight meningeal involvement. The spinal fluid Wassermann reaction and the Nonne reaction were positive; there was one lymphocyte. Two hours after an intravenous injection of 200 c.c. of a 10 per cent. solution of sodium iodid, the spinal fluid contained 4.377 mg. per hundred cubic centimeters as compared with the normal amount of 2.784 mg. under the same conditions.

These four observations point to one or both of two possibilities: Either the meninges are more permeable to iodin compounds when there is meningitis, or tissue actively involved by syphilis takes up more iodin than normal tissue. Loeb,[4] in 1912-1913, found that iodids accumulated in greater concentrations in syphilitic glands than elsewhere in the body, suggesting a selective affinity for syphilitic processes. Fujisawa,[5] in 1919, made the statement that all syphilitic tissue takes up more iodin than other organs. My observations tend to support the latter possibility. In Patient 1, moreover, the determination was made twenty-four hours after the last intravenous injection, which indicates that the iodin had been fixed in the syphilitic tissue, thus causing an increased concentration in the spinal fluid. In Patient 2 there was only a mild meningeal involvement. Neurologic examination revealed a far advanced parenchymatous degeneration of the posterior columns. This suggests that the large amount of syphilitic tissue had fixed a correspondingly large amount of iodin. In Patient 3, however, the process was predominantly meningeal, pointing to an increased permeability of the meninges. Patient 4 presented essentially the same condition as Patient 2, except that he had practically no active meningeal involvement. These data suggest the possibility that the iodin content of the cerebrospinal fluid following iodid administration may be of diagnostic importance in the study of diseases of the central nervous system.

CONCLUSIONS

1. Iodin is present in the cerebrospinal fluid of normal individuals.

2. Iodin, in increased amounts, is present in the cerebrospinal fluid following the administration of iodids by mouth, by rectum and intravenously.

3. The iodin content of the cerebrospinal fluid following administration of iodid by mouth or by rectum is small compared with that following the administration intravenously.

4. The iodin content of the cerebrospinal fluid following the administration of iodid intravenously plots a definite curve, depending on the amount administered.

5. Certain observations made in the course of this study suggest the possibility that (*a*) neurosyphilitic tissue takes up more iodin than normal nervous tissue, and (*b*) the presence of a meningitis increases the permeability of the meninges to iodin compounds in the blood.

4. Loeb, O.: Ueber Jodverteilung im syphilitischen Gewebe, Arch. f. exper. Path. u. Pharmakol. **69**: 108-113, 1912-1913.

5. Fujisawa, K.: Distribution of Iodin in Animal Body, Mitt. a. d. med. Fakult. d. k. Univ. zu Tokyo **19**: 389, 1918.

TREATMENT OF THE SUBNORMAL AND PSYCHOPATHIC CHILD

A NEW AVENUE OF APPROACH *

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Psychiatry may be broadly defined as the study of the conduct reactions of an individual in his attempted adjustment to his environment. As long as an individual is adjusted to his environment, as long as his conduct reactions are in harmony with those of the particular group in which he finds himself, so long is he considered normal from the psychiatric standpoint. If, however, his actions become bizarre or different from those commonly accepted as proper by the particular group of which he forms an integral part, he becomes the subject for psychiatric study.

From this it follows that conduct reactions that are considered normal in one environment may be definitely abnormal in another. For example, it may be perfectly normal for a Fiji Islander to consider himself fully dressed when bedecked in a loin cloth or in a fig leaf. However, any one assaying such a feat in this country would rightly be taken into immediate custody and his sanity investigated.

Again, we see individuals who, although apparently perfectly adjusted to their environment, fail miserably when called on to do tasks or to struggle with situations which require a degree of mental ability greater than that which they possess. This was only too well demonstrated in the recent war. A large proportion of the "war neuroses" or so-called "shell shock" cases was composed of boys who had led perfectly adjusted lives in, it is true, possibly sheltered environments. However, when called upon to meet unusual stresses and strains, they succumbed.

The nature of an individual's conduct reaction and the possibility of a successful adjustment will depend on two fundamental factors: heredity and environment.

Through the former the individual is endowed with a certain capacity for reacting; through the latter this capacity is either permitted full sway or stifled.

VARIOUS POSSIBILITIES

The interplay of these two factors permits of various possibilities.

1. An individual may be born without capacity for reacting or adjusting, no matter how simple the environment—for example, an idiot.

2. An individual may be born with only a partial capacity for reacting, one insufficient for his environment but amply sufficient if he be placed in a different environment. For example, a moron placed in a highly complex situation will ultimately be submerged, but if removed from such a situation and placed in a simpler one, he will, without doubt, be able to adjust himself and become a useful member of society. A comparable example is the child born of tuberculous parents, who in all probability will die if permitted to live in squalor, filth, and dirt, but will live in spite of the handicap of bad heredity, if placed in proper hygienic surroundings and given plenty of fresh air and nourishing food.

3. An individual may be well born as far as his capacity for reacting is concerned; but his environment

* Read before the Academy of Medicine, Feb. 2, 1921.

may be such that it tends to thwart or stifle the normal development of his conduct reactions. This is the situation that makes for truancy and delinquency.

Therefore, when confronted with a child showing some form of psychopathy, such as delinquency, antisocial behavior, truancy, mental defectiveness, or mental retardation, it becomes imperative, in order to make not only a proper diagnosis, but also a proper prognosis, and to outline proper treatment to determine: (1) the innate mental capacity of the child, and (2) the make-up of the child's environment.

How are these determined?

NECESSITY FOR CAREFUL PHYSICAL EXAMINATION

The mental capacity can be ascertained only by making a thorough and exhaustive physical and neuropsychiatric examination, including a psychometric test.

It is true that some, fortunately not physicians, assert that such examinations are superfluous: that a psychometric examination is all that is necessary to determine the mental status of an individual. Perhaps, then, it will not be amiss if we digress a minute and discuss briefly the value of psychometric tests when undertaken before a thorough physical examination has been made.

The tests that are most commonly employed are known as the Stanford revision of the Binet-Simon intelligence scale. This scale consists of sixty-six questions divided into groups of six, covering the ages of from 3 to 16 years, which is considered the average adult level. On the basis of the grading received in answering these questions, the child is considered either supernormal, normal, mentally retarded, or definitely feebleminded, and his whole future decided accordingly.

As Strecker[1] said: "Once regarded as mentally deficient, the next logical step is an institution, and therefore the problem of the retarded child is often visualized and at least potentially disposed of before a physical examination has been made. A child's future must not be decided by a psychometric measurement alone, however scientific and exact it may be." Now let us see how scientific and exact it is, and how great a value can be attached to the intelligence quotient if the test is made before a thorough physical examination has been given.

Of the sixty-six questions composing the scale, twelve, or about 18 per cent., are dependent on good vision, and eight, or more than 12 per cent., are dependent on good hearing, for their proper answers. No one will assert that a person with poor vision or poor hearing is necessarily feebleminded, but such a person is obviously handicapped in answering questions, requiring good vision or good hearing. To the self-styled psychoclinician it is immaterial that the child may be suffering from a high-grade myopia or a severe astigmatism or deafness. Apparently all that is essential is to know whether the question has been correctly answered or not.

To the psychoclinician, failure means only one thing, and that is mental defectiveness.

I could mention many other factors, such as the personal equation of the examiner, the emotional state of the child at the time of the examination, the presence of an endocrine dyscrasia or a congenital neurosyphilis, that will influence the value of the psychometric test.

However, enough has been said to show that mental tests are only relative and should not be considered the sine qua non in determining the mental status of a child. They are of importance only when correlated with the findings of a thorough physical and neuropsychiatric examination. This correlation should be made only by a properly qualified physician.

IMPORTANCE OF ENVIRONMENTAL MAKE-UP

Having determined the innate mental capacity of the child by means of an intensive physical examination, it then becomes necessary to determine the makeup of the child's environment.

The social, economic, educational and religious factors that compose the environment can be ascertained only with the aid of a social service worker trained along special lines. By that, I mean a social worker who has learned enough of the workings of the human mind to recognize the rôle that all these environmental factors play in determining conduct reactions.

It is apparent that, in order to determine how far a given environment is responsible for abnormal conduct reactions, it will be necessary to take the individual out of that environment and observe his conduct reactions when placed in an environment that is subject to scientific control. Furthermore, it is a psychologic truism that few children are capable of consciously formulating their difficulties. In order to know what difficulty must be overcome, one has to rely on actual observation of the child while at play and at work. An observation home for children gives trained observers an opportunity for studying these patients during different phases in a fairly normal environment.

Such a place is the Psychopathic Institute, which has been established on the grounds of the Jewish Hospital, Cincinnati, by the United Jewish Social Agencies. When a child is admitted to the institute, certain definite routine examinations are made. These consist of complete physical, neuropsychiatric, visual, dental, and serologic examinations. Special examinations are made as the indications arise. Each examination is made by a physician especially qualified in that particular field. In this way the patient receives the benefit of diagnostic group medicine.

In the meantime, the child is made to feel that he is not at a hospital but in a large home in which there are many other children. He is given household tasks to perform comparable to the ones that a child is ordinarly asked to perform at home. If he is of school age, he is transferred to the public school in the neighborhood.

A definite time is set aside for study, and a teacher is provided for those needing special instruction. In addition, several afternoons a week are devoted to vocational training. This consists of bead stringing, sewing, carpentry, weaving, pottery and reed work. The object of this work is twofold. In the first place, it is of direct benefit to the patient, and in the second place, it is of great help to those who are observing the child. The defective and retarded child, who probably has become discouraged through his inability to cope with the more or less abstract work of the regular school curriculum, finds to his great surprise and joy that he is able to cope with concrete tasks and to produce definite and constructive results. His self-esteem is thus unconsciously raised, and his whole mental attitude changed. Nothing is more conducive to effort than the knowledge that one has the ability actually to accomplish or produce.

1. Strecker, E. A.: Physical Factors in Mental Retardation, J. A. M. A. 95:659 (Sept. 4) 1930.

At the same time, those who are observing the child receive valuable information as to his potentiality for future industrial training and, thereby, his power of social adjustment when returned to the world.

The recreational and creature comforts of the child are not overlooked; thus many opportunities are afforded to watch the child while at play.

All of these social recreations are jotted down and finally are correlated with the facts obtained from the physical and mental examinations. These comprehensive data enable those in charge not only to make a diagnosis but also, at the same time, to recommend a course for future action.

A few case histories will possibly enable one more clearly to visualize the workings of this institute.

REPORT OF CASES

Case 1.—*History.*—M. L., aged 6, was referred to the Psychopathic Institute because of her mental retardation. The father, a butcher, was extremely alcoholic; the mother was feebleminded. Having given birth to five children, all mentally retarded, and having had two miscarriages, she had been sterilized. The woman's sisters were syphilitic. The child had had measles, whooping cough and pneumonia. Otherwise the findings were negative.

Physical Examination.—This was negative. . A roentgenray examination of the teeth showed nothing of a pathologic nature. The neurologic examination was negative except for a suggestive Babinski sign on both sides.

It was impossible to make a psychometric test because of lack of cooperation on the part of the child, as she talked but seldom. The blood Wassermann reaction was negative.

Course.—During her stay at the hospital, the child spoke only on rare occasions and chiefly when by herself. She showed affection in a dumb, appealing way, but took very little active interest in what was going on about her. She made a feeble attempt at playing with the other children. Not infrequently she would soil herself, and in common with those of her type, she often practiced self-abuse.

The diagnosis made was that of a low-grade imbecile. From the results of the different examinations, and from the observations of her social reactions during her stay at the Psychopathic Institute, it was obvious that this case showed no point of attack; that no amount of special or intensive training or special medical attention would help her to the extent of making her able to get along in the community. Furthermore, the home environment was such that no assistance could be looked for from that source. Hence the recommendation was made that the child be placed in an institution for life.

Case 2.—*History.*—E. F., aged 9, admitted to the Psychopathic Institute July 27, 1920. The chief complaint was her inability to learn and her use of vile language. Both parents were of a low order of intelligence, the mother being distinctly feebleminded. There were five children. The home conditions were of the poorest. The mother thought that the child's mental state was due to the fact that her brains were cut out when her tonsils were removed.

The patient had a normal birth and was breast fed. She walked at 9 months. Talking, however, was delayed. Her teeth appeared in the regulation time, but they crumbled very early. She had had scarlet fever, diphtheria, and whooping cough, and, when 6 years of age, convulsions of unknown origin.

For several years, the child had been attending parochial schools. She often ran away from school, and had a bad influence on the other children in the neighborhood. She not only used vile language, but ate garbage and dirt collected from the street. A summary of the examination made at the Psychopathic Institute revealed:

Physical Examination: The findings were negative.

Dental Examination: Nothing abnormal was found. The teeth required routine dental care.

Neurologic Examination: Station and gait were normal. The pupils were unequal, the right being larger than the left. The right pupil did not react to light; the consensual reflex was absent in this eye. There was no nystagmus and no exophthalmus. The right palpebral fissure was more slanting than the left. The knee jerks were exaggerated. There was a positive Babinski, Gordon's and Oppenheim's sign. The Achilles tendon reflex was not obtained.

Serologic Examination: The blood Wassermann reaction was ++++.

Psychometric Examination: The chronological age was 9 years; the mental age, 2 years and 7 months, and the intelligence quotient, 30.

Social Reactions: During the first two days, the child made no attempt at cooperation. She did not seem to understand what was said to her. Her language was very bad at times, her vocabulary in this respect being equal to that of the lowest roustabout. Her table manners were indescribable. She either did not know how or did not care to play games. She made no effort at social contact with other children. She spent her time wandering around aimlessly and listlessly.

Diagnosis and Treatment: Congenital neurosyphilis associated with mental defectiveness was the diagnosis and the child was put on protiodid of mercury and neo-arsphenamin. She remained at the institute for about a month, and during that time showed a distinct and steady mental improvement. She rarely used bad words, her table manners were better and she took an active part in the group activities of the children, showing in every way a more intelligent interest in her surroundings.

COMMENT

The diagnosis in this case was that of marked mental defectiveness and bad conduct reactions due both to congenital neurosyphilis and to poor home environment. One can easily understand how a congenitally syphilitic condition of the nervous system could produce mental defectiveness. However, such an inheritance need not make the individual use the vilest possible language nor eat garbage and dirt from the street. Here evidently we have two factors at work that are preventing the child from developing properly: first, a congenital disease of the nervous system, and, second, a deteriorating home environment. Both of these factors are subject to attack and are remedial.

In this particular case, the factor of environment was overcome by placing the child in a different home. At the same time, intensive antisyphilitic treatment was given. From the favorable reports of the boarding mother, we have the right to expect that the child's mentality will be greatly benefited by such treatment. It is true, of course, that we cannot say this with absolute certainty, but, both for the sake of the child and for the benefit of science, this treatment should be carried out.

A still different type of case is presented in Case 3.

Case 3.—*History.*—S. M., aged 7 years, was referred to the outpatient department on account of peculiar spells that he was having at night, while asleep. These spells resembled epileptic seizures, and lasted from three to ten minutes. During these spells, the child made queer, choking noises, and fell over, but he did not foam at the mouth nor cry out. One night, about six months previous to his coming to the clinic, the child had walked in his sleep. Just as he was about to open a window, he was seen by his mother, who promptly screamed. This awakened the child and frightened him greatly. Since then the child had been having peculiar spells at night. Lately, they had been increasing in frequency, occurring as often as three times a week.

Examination.—Both the physical and the neurologic examinations were negative. Mentally the child appeared very bright and alert. He was pleasant and answered questions readily and to the point. It was evident that he was of the hyperactive type and inclined to be mischievous. The social history bore this out. It showed that the child was well advanced in his school work; that he played excessively; that his habits as to eating and sleeping were irregular, and that he was a petty tyrant at home.

The problem that presented itself was: Is this a case of epilepsy or is it a condition of intense and excessive play life carried over into the child's dream life, resulting in subconscious spells of motor hyperactivity?

Treatment and Result.—The mother was told that the child would be given no medicine; but that she should not permit him to play at night and should put him to bed at 8 o'clock every evening. The mother returned to the clinic the following week and reported no improvement either in the frequency or in the intensity of the spells. However, she added that she had been unable to follow the instructions given as to limiting his play activities and putting him to bed early in the evening. The child simply refused to obey, and the parents seemed powerless to enforce their demands.

Thereupon the child was sent to the Psychopathic Institute. The evening of his arrival, he was put to bed, despite his strenuous objections, at 7:30. Shortly thereafter, he had what appeared to the nurse to be a typical epileptic seizure. He cried out, thrashed around the bed, and voided involuntarily. The next morning, however, he was told that no matter what happened, he would be put to bed promptly at 7:30 in the evening. The attacks never recurred.

During his stay at the Psychopathic Institute, he was perfectly normal and easily controlled. At first, however, he determined to have his way and displayed outbursts of temper when crossed. He soon learned to sublimate the greater portion of his egocentric make-up and he became very docile.

COMMENT

Here then was a case of abnormal conduct reaction producing an apparent psychopathic state, due principally to environmental factors. The boy realized the fact that he was mentally superior to his parents and took advantage of it. As a result, the parents had no control whatever over his conduct, even when that control was for the obvious improvement of the child himself.

The children so far studied at the Psychopathic Institute can be roughly divided into four groups that I have named thus: (1) personality group; (2) endocrin group; (3) organic group, and (4) mentally defective group.

In the first group, the personality group, are placed those children who are normal physically, but who present personality problems. This group contains the neurotic children, the emotionally unstable, the hyperactive and hypoactive types, and those suffering from bad home environment. These are the cases that require a tactful social worker not only to elicit the personal and environmental data but also to accomplish a permanent social adjustment. Here also the quickest and most startling results can be expected. Case 2 is a good example. Another case in point is reported herewith.

CASE 4.—*History.*—R. R., a girl, aged 11 years, was sent to the Psychopathic Institute because of her inability to get along at home. Her mother complained bitterly, saying that the child was insubordinate, had fits of temper, showed spells of moodiness during which she was very sullen, was irritable and spent nearly all of her evenings at the picture shows, usually remaining until the last performance was over. According to her mother, she had developed a peculiar defense reaction which consisted in yelling at the top of her voice whenever she was upbraided. The yelling was apparently instrumental in bringing the neighbors to the scene. These kind souls took it for granted that the mother had been beating the girl and scored her for her cruelty, despite the mother's strenuous denials. It did not take the patient long to discover the efficacy of such a procedure whenever she wanted to carry her point. The family history was not very encouraging. The father was said to be insane. One brother was feebleminded. The mother herself was of a medium grade of intelligence, but she was eager and willing to cooperate in improving her daughter.

Examination.—The child was 16 pounds underweight. She was pale, and her face had a drawn, sad expression. She looked and acted the part of the shut-in type of personality. Except for the anemia and loss of weight, the physical examination was entirely negative. Her reaction for the first few days was one of reticence and sullenness. She spoke only when directly questioned. Gradually, after many heart-to-heart talks with various social workers, she became more communicative and told of her childish desires and longings. Those that were possible of fulfilment, such as piano playing, were encouraged. Every effort was made to gain her confidence, and our patience was finally rewarded. We found that her apparent shut-in and egocentric personality was but a mask for a sweet-natured child who had been unable, through lack of proper help, either to formulate her difficulties concretely or to solve them.

After remaining at the Psychopathic Institute for several months, she was sent home happy and contented. From all reports her home adjustment is complete.

In the second group, I have placed those who show some form of psychopathy as a result of an endocrine disturbance. An example of this group is reported herewith.

CASE 5.—*History.*—J. C., aged 7, was referred for observation because he was retarded both in his physical and in his mental development. Examination showed that there was a hypo-activity of the anterior lobe of the pituitary gland of the Loraine-Levy type; in other words, a preadolescent hypoactivity of the anterior lobe of the pituitary gland. This child was put on whole gland pituitary extract, and has improved both physically and mentally.

In the third group are those children who have definite organic lesions of the central nervous system that account for their mental subnormality. Some of the lesions found were congenital syphilis, poliencephalitis and Little's disease. In this group belongs Case 2.

The fourth group contains the children who are definitely feebleminded, children who, while apparently in the best of physical health, are endowed with a mental capacity insufficient to cope with their environment. Our aim with such children is to find whether they are educable; in other words, whether they can be taught some occupation which, under supervision, will make them self-supporting and self-respecting members of the community. In this way, many can be saved from spending their lives in institutions.

SUMMARY

From this brief presentation, the value of such an intensive study of the subnormal child may be thus summarized.

It is of value from the standpoint of pure science in that such a study adds to our knowledge of subnormality in children. It is a method of approach other than custodial, and looks for origins and causes.

It is of value to society at large in that it restores to society only those who will be able to harmonize with it.

It gives to the unfortunate child the advantage of every possible measure known to medical science that might throw light on his condition and help to overcome his handicap.

It will stop the indiscriminate sending of children to institutions, on the findings of a psychometric test alone.

4 West Seventh Street.

Physiologic History.—After Haller, the principal landmark of eighteenth century physiology is undoubtedly the *Statical Essays* (1731-1733) of Stephen Hales, an English clergyman.—Garrison.

THE DANGERS OF PITUITARY EXTRACT

SOME CLINICAL AND EXPERIMENTAL OBSERVATIONS

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Oliver and Schaefer,[1] in 1895, first demonstrated the pressor action exerted by extracts of the posterior lobe of the pituitary, while Dale [2] described the stimulant action on uterine muscle. Blair Bell [3] employed pituitary extract therapeutically in 1909 for its uterine action, advocating its use to reduce bleeding in placenta praevia, post partum hemorrhage, and in cesarean section.

The obstetric employment of the new drug rapidly became popular in Germany, and no distinct limitations to its use seem to have been at first recognized. During 1911 and 1912, German medical periodicals were filled with eulogistic accounts of its marvelous action. According to these early reports, it was devoid of all danger. The use of forceps was relegated to the past; the obstetrician need have only a few ampules of pituitary extract and a hypodermic syringe in order to cope with any emergency that might arise. From Germany, the use of pituitary extract in obstetrics spread like a scourge to all parts of the world, being especially prevalent in those parts of our own country and of South America that were most under the influence of German "Kultur." Finally, the conservative South took up its use, and field workers of the health department tell us that country practitioners use it almost as a routine measure in their obstetric cases. In certain parts of Cuba, Porto Rico and South America, its use became so common that it was adopted by the midwives, with dire results.

It was not long, however, before a note of warning was heard in this almost universal chorus of praise. Edgar,[4] as early as 1913, stated that even small doses of pituitary extract given during the first stage of labor had caused fatal compression of the fetus, premature separation of the placenta, or even rupture of the uterus. In thirty cases in which he had used the drug in the first or second stages, there were four stillbirths, and three instances of deep laceration of the cervix, necessitating sutures to control the hemorrhage. Polak [5] reports a case of uterine rupture and said that the extract had no place during the first stage of labor. Espeut [6] also emphasizes the danger of a possible uterine rupture. Winn [7] has pointed out that pituitary extract is a dangerous substance, intimating that the only excuse for its employment is ignorance; "If there is any definite indication for the use of forceps, and you know how to use them, why not use them?" he pertinently asks. He had seen a case of uterine rupture and death following the employment of pituitary extract. Kosmak [8] points out that clinical action of pituitary extract may result in lacerations of the cervix and perineum, or complete rupture of the uterus. In addition, post partum hemorrhage and asphyxiation of the child are liable to occur. De Lee [9] was personally aware of twenty cases of ruptured uteri following the use of pituitary extract. He suggests that the use of this drug after a cesarean section may be the cause of hemorrhage or peritonitis, the spasmodic uterine contractions elicited causing the sutures to cut through. Litzenberg [9] reports hemorrhage in the brain of the fetus following the administration of pituitary extract to the mother. According to Jimenez,[10] pituitary extract is useful "only to the accoucheur and, possibly, to the gynecologic specialist later."

The most exhaustive study of the bad effects of pituitary extract has been made by Mundell.[11] In 1915 he analyzed the results following the use of pituitary extract in 3,952 obstetric cases; and later he[12] reported 1,293 cases collected during 1915 and 1916. The results in these two series are outlined in Table 1.

Wertenbaker [13] reported two cases of uterine rupture. Both patients were multiparas with normal pelves, dilated cervices and ruptured membranes. The fetuses were large, weighing slightly more and slightly less than 9½ pounds, respectively. Each mother had received a single intramuscular injection of 1 c.c. of pituitary extract, and had promptly collapsed, one succumbing a little later.

TABLE 1.—EFFECTS OF PITUITARY EXTRACT OBSERVED BY MUNDELL

	First Series	Second Series
Total number of cases	3,952	1,293
Uterine rupture	8 (1 in 494)	12 (1 in 106)
Fetal deaths	27 (1 in 146)	34 (1 in 38)
Asphyxia palida	.....	41 (1 in 32)

Maxwell [14] reports the case of a woman, aged 44, who had gone through eight full term pregnancies and seven spontaneous miscarriages. Forceps were used to terminate the sixth pregnancy on account of fetal indications. The seventh pregnancy was terminated by spontaneous delivery, after labor lasting ten hours, the child weighing 9 pounds. A painless hemorrhage occurred when she was at term with her eighth pregnancy. At this time she refused to go to the hospital, but entered two weeks later, with a history of slight bleeding of a week's duration. The membranes ruptured an hour after her entrance, and pains commenced five hours later. When the cervix was fully dilated and the head fixed, she was given ⅓ c.c. of a pituitary preparation intramuscularly. The head reached the spines in one and one-half hours, and the dose of ⅓ c.c. was repeated. Air hunger was complained of, and death occurred almost immediately. Necropsy revealed a child of 10 pounds in the left occipito-anterior position. There was an incomplete rupture of the uterus, extending through the uterine vessels.

Grosvenor [15] reports the case of a healthy young primipara. The fetus was in the left occipitoposterior position, the head firmly engaged; the cervix was moderately dilated. Four minims of pituitary extract was injected, and at the end of thirty-five minutes, 5½

1. Oliver and Schaefer: J. Physiol. 18: 277, 1895.
2. Dale: Biochem. J. 4: 427, 1910.
3. Bell, Blair: Biochem. Centralbl. 9: 631, 1909.
4. Edgar, J. C.: Pituitary Extract in Uterine Inertia, abstr. J. A. M. A. 60: 1733 (May 31) 1913.
5. Polak, J. O., in discussion on Cragin, E. B.: Under What Conditions Should Uterine Inertia Be Treated by Artificial Delivery? abstr. J. A. M. A. 60: 1734 (May 31) 1913.
6. Espeut: München. med. Wchnschr. 60: 1774, 1913.
7. Winn, John F.: J. A. M. A. 63: 1978, 1914.
8. Kosmak, G. W.: The Use and Abuse of Pituitary Extract, J. A. M. A. 71: 1117 (Oct. 5) 1918.
9. In discussion on article by Kosmak (Footnote 8).
10. Jimenez, N. J. Rev. Clin. 1: 149 (March) 1917; abstr., J. A. M. A. 69: 597 (Aug. 18) 1917.
11. Mundell, J. J.: Am. J. Obst. 73: 306 (Feb.) 1916.
12. Mundell, J. J.: The Present Status of Pituitary Extract In Labor, J. A. M. A. 68: 1601 (June 2) 1917.
13. Wertenbaker, William: Spontaneous Rupture of Uterus Following Administration of Pituitary Solution, J. A. M. A. 68: 1612 (June 2) 1917.
14. Maxwell, Alice F.: Uterine Rupture At Term After Pituitary Extract, J. A. M. A. 74: 1378 (May 15) 1920.
15. Grosvenor, Wallace F.: Surg., Gynec. & Obst. 25: 221, 1917.

minims. Collapse followed the second pain after the last injection. Death occurred, and a complete uterine rupture was revealed at necropsy.

Telfair [16] reports a case of ruptured uterus following the administration of two doses of pituitary extract, each 1 c.c., the patient having a contracted pelvis. Marcondes [17] reports five fatal cases occurring after the use of the drug by midwives. Marchand [18] encountered a case in which eversion of the uterus and fatal hemorrhage occurred.

It is rather significant that most of the cases reported occurred after administration of the drug by the "other fellow." There seems to be some reticence felt by the "other fellow" to report his own catastrophes, which suggests to us that a few instances of uterine rupture have followed the use of this drug but have not become generally known. Our own experience with pituitary extract has been very limited; we can truthfully say that we have not been so unfortunate as to witness any serious consequences following its employment, but we have been able to resurrect a few interesting reports from the note books of the student interns of the Medical College of Virginia. While the students are not allowed to use pituitary extract in outpatient obstetric work, some of them are interns in the local hospitals and are allowed to turn in the histories of patients that have been delivered in the hospital.

CASE 1.—A white primipara, aged 24, expected to be confined, Jan. 7, 1916. The past history was negative. The external measurements were: interspinal, 24 cm.; intercristal, 28 cm.; trochanteric, 30 cm.; Baudelocque's diameter, 19 cm. No internal measurements were made. The patient went into labor, Feb. 1, 1916, at 9 p. m. The membranes ruptured early in the first stage; the second stage began at 1:30 a. m., February 2, lasting four hours. Pituitary extract, 1 c.c., was injected. The placenta was delivered spontaneously in fifteen minutes. The mother died five hours after delivery; necropsy was refused.

CASE 2.—A colored tertipara, age not stated, was brought to the Virginia Hospital at term with a diagnosis of transverse presentation, April 1, 1917. Bags were inserted, and the next day a Braxton Hicks version was performed, which was very difficult. A foot was brought down, and 1 c.c. of pituitary extract was injected. Twenty minutes was required for the extraction of the child. During the third stage, the mother collapsed and died before the placenta was delivered. Necropsy revealed rupture of the uterus in several places and the presence of a well marked Bandl's ring. The child was stillborn.

CASE 3.—A colored tertipara, aged 25, was brought to the Virginia Hospital, Aug. 9, 1917, with a history of having been given pituitary extract by her attending physician. There was no record of pelvic measurements. On entrance into the hospital there were no labor pains; vaginal examination revealed the cervix almost completely torn off. Laparotomy was performed and the uterus was torn near the cervix; the dead fetus lay free in the abdominal cavity. Supravaginal hysterectomy was performed, but the mother died on the third day.

EFFECT ON THE CHILD

Most attention has been directed to the undesirable action of pituitary extract on the mother; injury to or death of the child is mentioned incidentally. Wilkerson [19] has reported convulsions occurring in the child after the mother had been given pituitary extract prior to delivery, and Sheffield [20] reports a similar case. Intracranial hemorrhage is a common finding in stillborn children; Spencer,[21] Archibald,[22] Warwick [23] and Bailey [24] have reported its occurrence in from 40 to 50 per cent. of the cases examined. We do not wish it to be inferred that we consider the use of pituitary extract as the sole cause of intracranial hemorrhage of the newborn; such factors as asphyxia and trauma to the head are only too obvious influences, and attention has been called to the possibility of hemorrhage in this locality being simply a manifestation of the hemorrhagic diathesis.

Bailey [24] has seen hemorrhages into the ventricles of an infant delivered by cesarean section, and Osler [25] describes a similar condition in the brain of a fetus in the uterus of a woman dead of typhoid fever. We do believe, however, that the action of pituitary extract creates conditions ideal for the production of intracranial hemorrhage in the child, and this supposition is supported by the small number of cases of stillborn children or of children dying soon after birth on whom we have been able to secure necropsies. Through the kindness of Dr. S. W. Budd of the Johnston-Willis Sanatorium, and Dr. H. S. Thatcher of the Memorial Hospital, we are able to report the results of the examination of the brains of twelve such infants. One of the bodies was secured from the department of anatomy, and no history was obtainable; this case will not be included in the series, because we are unaware as to whether pituitary extract was used or not. No hemorrhage was present in this case. For the sake of brevity, only a brief obstetric history and the anatomic diagnosis will be given.

1. Full-term, stillborn baby; mother eclamptic. Anatomic diagnosis; prematurity; marked postmortem changes.

2. Full-term, stillborn baby; spontaneous delivery. Anatomic diagnosis, stillborn; overdue.

3. Premature baby; mother preeclamptic; bags and version. Anatomic diagnosis, atelectasis; marked hyperemia of all the organs; marked distention of the carotid veins; hyperemia of the brain; petechial hemorrhages of the right lung; patent ductus arteriosus and foramen ovale.

4. Premature baby; spontaneous delivery; died fifth day. Anatomic diagnosis, prematurity; a huge hemorrhage in the left lateral ventricle of the brain; *no subdural hemorrhage.*

5. Premature baby; placenta praevia; bags and version. Pituitary extract, 0.5 c.c. Baby lived six hours. Anatomic diagnosis, foramen ovale and ductus arteriosus; fetal lobulation of the kidney; marked hyperemia of the brain and a huge *subdural hemorrhage.*

6. Premature baby; mother manic-depressive. Cervix rigid; packed with gauze and mother given a total of 3 c.c. of pituitary extract in 4-minim doses. After twenty-four hours, packing removed and a No. 4 bag introduced. Additional 6 c.c. of pituitary extract given in 0.5 c.c. doses; practically no effect produced on uterine contractions; these had to be stimulated by traction on the bag. Baby delivered by version. Anatomic diagnosis, prematurity; marked hyperemia of the brain; *subdural hemorrhages.*

7. Labor induced two weeks before term because of large placental infarct. Bags and version. Baby died in twenty-four hours. Anatomic diagnosis, marked hyperplasia of the thymus, this gland reaching and adherent to the diaphragm. Marked hyperemia of the brain.

8. Face presentation; version. Anatomic diagnosis, marked postmortem autolysis (death in utero); hyperemia of the brain, kidneys, suprarenals and pancreas; hemothorax, atelectasis; hemoperitoneum, patent foramen ovale; traumatic fracture of femurs, traumatic rupture of the abdomen.

9. Premature baby; labor induced because of maternal nephritis; bags and version. Baby lived four hours. Anatomic diagnosis, marked hyperemia of the brain; external hydrocephalus.

16. Telfair, J. H.: Am. J. Obst. 72:655 (April) 1916.
17. Marcondes, V.: J. A. M. A. 67:717 (Sept. 2) 1916.
18. Marchand, D. P.: Bol. de la Asoc. Med. de Puerto Rico 14 (Marzh) 1918; abst., J. A. M. A. 70:1509 (May 18) 1918.
19. Wilkerson, F. W.: South. M. J. 7:614, 1914.
20. Sheffield, Herman B.: Am. J. Obst. 69:379, 1914.
21. Spencer, Herbert: Trans. Obst. Soc., London, 33:203, 1892.
22. Archibald, Edward: American Practice of Surgery 8:209.
23. Warwick, M.: Am. J. M. Sc. 158:95 (July) 1919.
24. Bailey, H.: Am. J. Obst. 1:52 (Oct.) 1920.
25. Osler, William: Principles and Practice of Medicine 8:987.

10. Mother eclamptic; delivered by low forceps; double cleidotomy. Anatomic diagnosis, trauma of neck; petechial hemorrhages of the heart; hemopericardium; hemoperitoneum; hyperemia of the brain, marked postmortem degeneration.

11. Shoulder presentation; version and extraction after twenty-four hours' labor. Child died on fifth day. Anatomic diagnosis, bronchopneumonia; no intracranial changes.

Though the number of cases is small, it is indeed significant that subdural hemorrhage occurred in none of the nine cases in which the mother had not received pituitary extract, and that subdural hemorrhage occurred in both of the cases in which pituitary extract had been given to the mother; once in the small dose of 0.5 c.c.

If we are right in the assumption that the possibility of intracranial hemorrhage is increased by the use of pituitary extract, the death of the child is not the only catastrophe to be feared. Heard [26] reports three cases of diffuse nervous lesions due to cerebral hemorrhage in infancy and resulting in terrible afflictions; in one case at 9 months; in the second at 13 months, and in the third at 19 months. In each case the parents were healthy and the mother was a multipara with a history of previous normal births. There was no history of prolonged or difficult labor, but in each instance pituitary extract was administered early in labor, and delivery was precipitated shortly afterward.

INEFFICIENCY OF STANDARDIZATION

Commercial preparations of the extract of the pituitary gland probably contain at least two active principles. The manufacturers emphasize the fact that their preparations have been "physiologically standardized," but the accepted method for this assay is based on the uterine action of the preparation, and may furnish no indication of the action on other structures. Indeed, as judged by the examination of some of the commercial preparations, one is led to the belief that even the uterine action of these different samples may vary considerably. Therefore, at the outset it may be said that in using pituitary extract as at present obtainable, the physician is dealing with a substance that is likely to show qualitative and quantitative differences in action, regardless of peculiarities of the individual patient. Therapy is difficult enough when we deal with drugs of constant composition; it is rendered doubly so when an added uncertainty is introduced by the use of those which cannot be accurately standardized.

ACTION OF PITUITARY EXTRACT

Considered as a whole, the action of pituitary extract is characterized by a stimulant action on the smooth muscle. In most cases this is believed to result from the influence that the drug exerts on the muscle itself, though it has been suggested that, in case of the intestinal muscle, nervous elements may be involved also. For the purpose of the present discussion, it is necessary to consider the manifestations of this action only as it concerns the circulation and the uterine contractions.

Unlike epinephrin, pituitary extract constricts blood vessels, regardless of their nerve supply. Thus, it is found that the pulmonary, cerebral and coronary vessels are apparently as markedly influenced as are the vessels in the splanchnic region. The renal vessels are not constricted; indeed, dilatation from the rise in blood pressure is seen here. The heart muscle is not acted on in the same way as the smooth muscle; instead of the stimulation that is seen in the case of the latter, the action of pituitary extract on the cardiac muscle is one of depression. In the intact animal, this direct depressant action on the cardiac muscle is reinforced by the stimulation of the cardiac-inhibitory center. Indeed, with some samples the inhibition of the heart from the stimulation of the center may be the more important factor in the production of the cardiac weakening. It is usually stated that the cardio-inhibitory center is stimulated by the rise of pressure; but this is inadequate to explain the action in all cases. In analyzing the various effects on the circulation, it is apparent that the efficiency of the heart is lessened in three ways:

First, there is the direct depression of the muscle; second, the rise of the blood pressure throws an additional load on the heart, and, third, the constriction of the coronary vessels will lessen the flow of blood to the heart muscle and in this way tend to interfere with its proper nutrition. It is possible that conditions may be encountered in which there is a circulatory disturbance resulting simply from a loss in the tone of the vascular muscle. More often, however, there is a coincident depression of the heart, if indeed this is not the more important factor. Pituitary extract may be beneficial in the cases in which there is only undue vascular relaxation; when there is likewise cardiac weakening, it would seem to be distinctly contraindicated. While this is a consideration more applicable to the use of pituitary extract in surgical conditions, it may be of importance from the obstetric standpoint also. Vogt has emphasized the danger of maternal collapse from the influence that pituitary extract exerted when used obstetrically. The uterus is particularly susceptible to the stimulant action of pituitary extract. A peculiarity of the action here is that the functional state of the organ influences the intensity of the action of the drug, this becoming more powerful with the progress of the pregnancy. The lack of efficiency of pituitary extract early in pregnancy is illustrated in one of our cases, in which a total of 9 c.c. was administered with apparently no effect on the uterine contractions. It is stated not infrequently, and apparently is widely accepted, that the action of pituitary extract differs essentially from that of ergot. Ergot, as is well known, may cause a tetanic contraction of the uterus, with disastrous results. Pituitary extract, on the contrary, it is asserted, tends simply to accentuate the normal movements of the organ. The sequence of contraction and relaxation continues undisturbed, and the danger of tetanus is never encountered with any reasonable dose. Attempts to demonstrate this action of pituitary extract by means of animal experiments have, in our experience, invariably proved unsuccessful, both ergot and pituitary extract causing an increase in the tonus which was sustained, and leading to the development of small contractions superimposed on the tonic rise.

A search of the literature has failed to reveal any positive evidence in support of this claimed freedom from a tetanizing action manifested by pituitary extract in its action on the uterus. Lieb [27] believes that there is no tendency to tetanus, but Sollmann [28] states that these results "must be viewed with some suspicion."

In addition, we have been able to secure evidence that a similar tetanizing action is produced on the human uterus in situ. By introducing a Voorhees bag into the cervical canal and connecting its interior with a mercury manometer, the changes in pressure due to the uterine contractions were graphically recorded

26. Cited by Mundell (Footnote 12).

27. Lieb, Charles C.: Am. J. Obst. 71: 209, 1915.

28. Sollmann, Torald: Manual of Pharmacology, Philadelphia, W. B. Saunders Company, 1918, p. 343.

on the smoked surface of a kymograph. Even doses of pituitary extract as small as 2 minims cause a persistent increase in the tone of the uterus. As is the case with the uteri of lower animals, there are smaller contractions superimposed on the tonic increase in pressure, but the base line does not return to its original level for some time, as long as twenty-eight minutes elapsing after one dose of 2 minims; while after the injection of 0.5 c.c., the increased tonus persisted thirty-five minutes. In two tracings, the level of this new base line was above that of the height of the individual contractions occurring before the administration of the drug; in other words, there was a constantly maintained intra-uterine pressure decidedly higher than that existing at *the height of the individual contractions* before the drug was injected.

COMMENT

Our observations are not unique. Kosmak [8] reports tetanus of the uterus resulting from the administration of 1 c.c. of pituitary extract before an extraperitoneal cesarean section; and both Mosher [29] and McNeil [30] have observed similar manifestations of the action of the drug on the human uterus when resistance was encountered to the passage of the fetus.

The Memorial Hospital of Richmond offers a favorable opportunity for a clinical study of the results of the use of pituitary extract. A number of obstetricians are on the staff of this institution, and a variety of obstetric procedures are employed. Miss Mary C. Allen has collected for us the records of all the full-term deliveries that have occurred during the last six months in the Memorial Hospital, the cases being divided into two groups, determined by whether pituitary extract had or had not been employed before delivery. The results obtained are given in Table 2.

TABLE 2.—COMPARATIVE RESULTS WITH AND WITHOUT PITUITARY EXTRACT

	Number of Cases	Infant Deaths		Free from Lacerations		Lacerations			
						1st Degree		2d Degree	
		No.	%	No.	%	No.	%	No.	%
With pituitary extract	34	3	8.8	11	32.3	12	35.3	11	32.3
Without pituitary extract	59	2	3.4	36	61	16	27.1	7	11.8

It might be argued that these figures are unfair, as it is probable that the pituitary extract was employed in only the more difficult cases. This is not the case. The pituitary extract was given in most instances as a routine measure; in the nonpituitary series are included cases in which delivery was effected by version and forceps as well as the normal cases, constituting a more unfavorable group than the first (aside from the use of pituitary).

CONCLUSIONS

The clinical evidence indicates that the use of pituitary extract is accompanied by danger to the mother and to the child. The injurious action on the mother is manifested by an increase in the frequency of perineal lacerations and the occasional occurrence of uterine rupture, *in cases in which all the indications for the use of the extract are present.*

The dangers to the child consist in the greater tendency toward the production of asphyxia and toward the occurrence of intracranial hemorrhage.

From the experimental evidence, it is apparent that the circulatory action of the drug is undesirable, and that it tends to cause tetanus of the uterus in lower animals and also in human beings.

We do not wish to convey the impression that the use of pituitary extract always results in a catastrophe; the vast number of cases in which there was no apparent injury renders this attitude absurd. We do believe, however, that there is always the possibility of harm resulting even from the so-called "safe" doses, a danger so real that it is scarcely justifiable to risk it for the sake of the few added hours of rest or those left free to be devoted to other tasks by the "obstetrician."

29. Mosher: Surg., Gynec. & Obst. 22: 108.
30. McNeil: Am. J. Obst. 74: 432.

MASSIVE DOSES OF ALKALI IN TWO CASES OF IMPENDING DIABETIC COMA

WILLIAM E. CARY, Ph.D., M.D.
CHICAGO

Earlier writers on the clinical management of acid intoxication in diabetes, beginning with Naunyn [1] and his associates, advocated the use of massive doses of alkali and recorded strikingly beneficial results in many cases as a result of this treatment. The observed amelioration by alkali of the symptoms which attend the development of the picture of true dyspneic coma in diabetes had its parallel in the laboratory, since as early as 1877 Walter,[2] in his report concerning the effect of acid on the animal body, had shown that symptoms of acid poisoning, following a specified dose of acid, could be prevented from occurring, or be markedly affected after they had occurred, by a suitable administration of alkali. In fact, the observed beneficial effects of alkali on the symptoms of developing dyspneic coma formed, and they still form, one of the fundamental stones on which the conception is based—that true diabetic coma is the picture of acid poisoning.

This conception has become generally accepted. In recent years, however, certain writers have taken the position that the use of alkali, and specifically sodium bicarbonate, in diabetic acidosis is of no particular value; that on the contrary it may be harmful; that its employment has been greatly abused, and that the administration of alkali in diabetic acidosis should be discouraged.

My purpose in the present paper is to report two cases, with extreme alkali deficits and symptoms of severe acid intoxication, in which massive doses of sodium bicarbonate were followed by striking clinical improvement. At the time when treatment by alkali was begun, the patient in each case was apparently in imminent danger of passing into an irretrievable comatose state. In both instances it seemed fair to assume that all the benefit which could be obtained by rest in bed, the application of warmth, gentle relaxation of the bowels and fasting had already been attained, and that further adherence to the employment of these measures alone would result in coma and death. In fact, so far as can be learned from the literature, it would appear that no patients untreated with alkali have been observed to recover with alkali deficits as great as were found in these.

1. Naunyn: Der diabetes mellitus, 1906.
2. Walter: Arch. f. exper. Path. u. Pharmakol. 7: 148, 1877.

PRINCIPLE OF TREATMENT

The administration of alkali was carried out with the view of introducing into the body in the shortest possible space of time a total quantity of sodium bicarbonate sufficient to diminish the alkali deficit until this deficit should be less than that which commonly occurs with beginning symptoms of acid poisoning in diabetes. Thus, the objective was to administer a dose of alkali sufficient to raise the volume percentage of the plasma carbon dioxid to at least 40, and to introduce the dose in the shortest time possible without injury to the patient, to the end that further toxic action of the acid on the protoplasm of the cells might be stopped without the loss of an unnecessary hour. Otherwise, the destructive effect of the acid might progress beyond the point of possible repair.

METHODS OF TREATMENT

On the supposition that, with normal individuals, the volume percentage of plasma carbon dioxid averages about 65 (in accordance with the observations of Fitz, Cullen and Van Slyke, and with my own experience with the method which they introduced), the finding of an index of 15 would imply that the alkali reserve had sunk roughly to 23 per cent. of the normal. A plasma carbon dioxid of 40 in the same case would imply the existence of an alkali reserve amounting, roughly, to 61 per cent. of the normal. The difference is 38 per cent. Taking the total alkali reserve for a man of average weight as in the neighborhood of 225 gm. (from the observations of Sellards and others), then the dosage of alkali necessary to bring the plasma carbon dioxid index from 15 to 40 would be 38 per cent. of 225 gm., or 85.5 gm. The effort would therefore be to give the patient 85 gm. of soda as quickly as permissible. Setting six hours as the time within which the dose should be given, and four hours if possible, three routes of administration are available: (1) mouth or stomach tube; (2) bowel, or (3) vein. These will be discussed in the reverse order.

Intravenous administration is to be considered only in cases in which administration by other routes proves insufficient. As is well known, a sodium bicarbonate solution cannot be boiled without partial conversion of the bicarbonate to the carbonate; and for the preparation of a sterile solution, special precautions are necessary. One may follow the plan used by Sellards, or the powdered bicarbonate may be sterilized in sealed tubes and then added to sterile water, making a 4 to 5 per cent. solution. When all is ready, 400 c.c. of this solution per hour is about as much as one should attempt to give; and unless the material has been prepared beforehand, its preparation is liable to cause a loss of valuable time and further delay may be caused by assembling the paraphernalia necessary for the intravenous injection itself.

By the bowel, one may employ a 3 per cent. solution and succeed in giving it at the rate of 300 c.c. per hour by the drip method. If occasionally a larger dose is successfully given, more often it will not be possible continuously to administer as much as this. If we succeed in giving 9 gm. of the soda per hour by this route for three or more hours, it is as much as can be anticipated.

Administration by mouth is the most satisfactory method in diabetic cases. Although some diabetic patients with high acid intoxication vomit during the early stages, they will usually retain sodium bicarbonate surprisingly well. They differ in this respect from many cases of acidosis with nephritis. I have usually found it possible to give as much as 20 gm. of sodium bicarbonate by mouth per hour without vomiting, and feel that this is the method of first choice in every case. In comatose cases, the alkali may be given if necessary through the stomach tube. However, a case in which the patient has sunk completely into coma is usually hopeless; and unless a patient is actually comatose, it will commonly be found possible to nurse the alkali solution in by mouth, a spoonful at a time, if the effort is faithfully made. If the rate of administration by mouth falls behind 15 gm. per hour for one or two hours, accessory methods should be called on early to make up this deficiency: first, the rectal drip, and then the intravenous injection, if the latter is unavoidable. The introduction of massive doses of soda necessarily increases the osmotic concentration of the body as a whole. Increased thirst is therefore to be expected, and great care should be taken to provide for an adequate intake of water along with the soda. For the purpose of supplying water, the bowel may well be used, thus reducing the volume of liquid given by stomach. To this end the oral administration of the bicarbonate may be supplemented by the rectal administration of physiologic sodium chlorid solution at the rate of from 400 to 500 c.c. per hour.

The degree of alkali deficiency was measured by the Van Slyke method,[1] the readings all being made in duplicate by the same observer immediately after the withdrawal of the blood. A further check on the degree of alkali deficiency was obtained by testing the urine with indicators, although it was not to be expected that the urine would become alkaline. In neither of the cases was the urine alkalized at any time, although very large amounts of sodium bicarbonate were given.

REPORT OF CASES

Both of the patients were admitted to Dr. R. T. Woodyatt's service in the Presbyterian Hospital, and the treatment was undertaken under his supervision.

CASE 1.—L. W. S., a man, aged 23, had been well instructed in diabetic management at a previous admission. In fact, he had been employed by the hospital and the Otho S. A. Sprague Institute to do many of the more time-consuming, chemical, laboratory tests, and especially those concerned with diabetes. He had been keeping sugar free on about 3,000 calories for four years. He contracted a severe "cold" two weeks before entering the hospital, and had virtually starved himself for one week before admission. On admission, Dec. 4, 1920, he was markedly emaciated and in poor condition after an all night's journey. At 11 a. m., when admitted, the respirations were 26 per minute, excessively deep and painfully labored, the pulse 130, of only fair quality, and the leukocyte count 23,200. The face was definitely flushed and the patient highly irritable, and the mentality confused and retarded. He felt sleepy, and in answer to questions was unable to remember words he wished to use. The urine contained large amounts of sugar, acetone and diacetic acid. At 1 p. m. the respirations were 25, pulse 120 and the plasma carbon dioxid reserve, 13.63 per cent. by volume. At 3 p. m., 8 gm. of sodium bicarbonate, with 75 gm. of glucose, were given by mouth, and a rectal drip of 3 per cent. sodium bicarbonate was started. The latter could not be retained, and was discontinued. The objective of giving the patient at least 20 gm. of the bicarbonate per hour was kept constantly in mind. By the time he had received 25 gm. of soda, he was feeling better and said he breathed easier than he had for a week previously. After 50 gm. had been given, the patient was found resting on one elbow reading a magazine. The respirations were then

1. Van Slyke, Cullen and Stillman: Proc. Soc. Exper. Biol. & Med. 12:184, 1915.

only 20 and the pulse 96, while the alkali reserve had risen to 26.09 per cent. by volume. The urine was still strongly acid. Soda by mouth was continued at the rate of about 10 gm. every half hour until a total of 80 gm. had been given. The next morning, Dec. 5, the respirations were 16, pulse 84, and the alkali reserve 31.52 per cent. by volume. The patient was kept on absolute starvation at this time, more alkali was then given, and after a total of 106 gm. had been reached, the alkali reserve was 32.17 per cent. by volume. The alkali was then stopped for eighteen hours, as it was felt that the patient was out of immediate danger of coma; but it was again started, on December 6, simply to determine by Sellards' test the amount of alkali deficiency. After a total of 198 gm. had been given, the reserve was 41.45 per cent. by volume and the urine still strongly acid. December 7, after a total of 350 gm. had been given, the alkali reserve was 64.61 per cent. by volume; but still the urine was acid. The patient had developed a mild diarrhea and was tired of taking soda, so it was discontinued. He had received 350 gm. of sodium bicarbonate in seventy-two hours, raising the alkali reserve from 13.63 to 64.61 per cent. by volume without rendering the urine alkaline at any time. Naturally, this figure does not represent the actual deficiency, since the tendency to depletion of alkali had been going on continuously during the period of treatment. He did not desugarize after four days of absolute starvation, and was then fed for eight days and then desugarized. The diet was now built up gradually to 610 calories, when sugar appeared. The diacetic acid disappeared on the eighth day, and the acetone on the twelfth day after admission.

CASE 2.—A. C., a boy, aged 15 years, had left the hospital, July 20, 1920, unusually well educated in diabetic management, with a tolerance of 2,400 calories. He remained sugar free on his diet until he "caught cold" one month before the second admission. He attempted desugarization at home without success. The day before admission his throat became sore, and on the morning of admission he developed hyperpnea, flushed face, vomiting and great drowsiness. He was admitted to the hospital at 1 p. m., Dec. 27, 1920, with deep, unlabored breathing, 36 per minute, and with a pulse of 136. The face was flushed without any evidence of cyanosis, he was drowsy, and the eyelids were half closed as he lay in bed. His speech was thick and slow, and he seemed confused in what he tried to say. The urine contained much sugar, acetone and diacetic acid, and the breath was heavy with acetone. The leukocyte count was 25,300, and the plasma carbon dioxid was 14.31 per cent. by volume. He was immediately given sodium bicarbonate by mouth; and, as this was well tolerated, no attempt was made to give it by proctoclysis. By 6 p. m., 40 gm. had been given and the patient was breathing much easier, 30 times to the minute. At 10 p. m., 80 gm. had been given; the respirations were 28, the pulse 116, and the plasma carbon dioxid reserve 31.86 per cent. by volume. The alkali was discontinued and started at 7 the next morning, when the respirations were 22 and the pulse 100 per minute. At 4 p. m., December 28, after the patient had received 160 gm. of soda, the respirations were 20, the pulse 96, and the plasma carbon dioxid 45.83 per cent. by volume. The soda was continued until 240 gm. had been given in forty-three hours, with a drop in the respiration from 36 to 20, and a decline of the pulse rate from 136 to 96. The patient was on an absolute fast for four days without becoming sugar free. He did not become completely acetone free at any time. He became demoralized and was finally permitted to go home, Jan. 15, 1921, while we were still unsatisfied that the greatest possible improvement from diet had been reached.

COMMENT

It is not my purpose to advocate the unrestricted use of alkali in diabetic acidosis. In harmony with others, I have seen cases with alkali reserves of 30 and under rise to a normal level without the administration of any alkali. Nor is it thought to be necessary to give enough alkali, as a routine, to bring the reserve to normal and alkalize the urine even in cases of severe acid intoxication. My experience indicates, however, that in cases of precoma in diabetes with low reserve of alkali, the symptoms of acid intoxication can be promptly eliminated by immediate recourse to alkali—preferably by mouth but, if absolutely necessary, by other routes in addition—when, as in cases such as those described above, no other precedure alone will avert death. The importance of getting from 25 to 50 gm. of the alkali into the body within the first two hours is emphasized. The reaction of the urine should be carefully observed, and frequent tests of the urine or blood made to prevent overalkalization. In severe cases, the immediate danger of coma passes when the reserve is brought to 30, and conservatism in going above 40 may possibly be wise, although I have never seen any harmful results that could be attributed to the use of alkali in these cases. The outlook for such cases as I have described is exceedingly grave unless something radical is done and done without further loss of time. Each of our cases had a fairly high tolerance before the acid intoxication was precipitated by infections.

Presbyterian Hospital.

Clinical Notes, Suggestions, and New Instruments

BILATERAL PULSE OBLITERATION IN THORACIC ANEURYSM

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It is known that aneurysmal involvement of the thoracic aorta has been recognized for centuries. Textbooks dealing with the subject give numerous signs and symptoms encountered, any or all of which may be absent. According to Hirschfelder, Harvey was first to report alteration of the pulse in this disease. Subsequently, throughout the literature, inequality and retardation of the pulse are frequently referred to, while obliteration is seldom mentioned. The case here reported is unique in that bilateral obliteration of a discernible pulsation in the radials occurred.

REPORT OF CASE

History.—J. S. B., a white man, aged 52, salesman, seen, Oct. 27, 1920 (and twice following week), complained of severe occipital headache, pain in the back of the neck and shortness of breath, all of which began one and one-half years before. Headache had been almost constant since the onset except for a short time following the extraction of infected teeth. After a few months, more teeth were extracted, without result. There had been dizziness and cough for the last twelve months, and tingling in the left thumb for three months. During a "weak spell," six weeks before, his wife (a trained nurse) could not obtain the pulse. The patient had lost 20 pounds recently. He had had gonorrhea at 27. Syphilis was denied. His wife had had five miscarriages. The patient was actively engaged in business. He drove his car an average of 60 miles daily. The family history had no bearing on the present condition.

Physical Examination.—The patient was well nourished. The skin of the face and neck was dusky, and the eyes were sunken. There was a slight cyanosis of the lips and the lobules of the ears. The superficial veins of the face, neck and chest were visible, while those of the forearms were prominent. Very definite clubbing of the fingers, with slight cyanosis, was present. The arteries (radial and brachial) were easily palpated and compressible. No pulsation whatsoever was found in the radials, brachials or external carotids. There was visible pulsation in the sixth intercostal space to the outer side of the left nipple, and at the ensiform

cartilage. The angle of Ludwig was quite prominent. The apical impulse was fairly strong, and the heart rate increased. Over the upper two or three intercostal spaces, and more pronounced to the right of the sternum, there was a diffuse and slightly expansile impulse. There was no palpable impulse posteriorly. Tracheal tug was present. The apex of the heart was located in the sixth intercostal space, 4½ inches to the left of the midsternal line. The right border of the heart was difficult to map out. Auscultation over the mitral area revealed normal sounds. The heart rate was 120 a minute, but regular. Over the second and third interspaces and on each side of the sternum could be heard a soft systolic murmur followed by a muffled second sound. This murmur was audible in a degree over the greater part of the precordium. The impulse of the abdominal aorta was forcible. The external iliacs and femorals showed normal pulsation. There was inequality of the pupils, but they reacted readily to light and accommodation. The retinal veins were engorged. Pyorrhea alveolaris was present. Hearing was slightly impaired. The patellar reflexes were markedly exaggerated, but equal. Slight tremor of the extended fingers and definite facial tremor were noted. A sphygmomanometer cuff was placed about the left thigh, and by palpating the popliteal artery the systolic blood pressure was found to be 125 mm. of mercury. Physical examination otherwise was negative. The findings suggested aneurysm. This diagnosis was immediately confirmed by the fluoroscope, which revealed involvement of the greater part of the arch and descending thoracic aorta. The heart was displaced downward and to the left, but was not enlarged. Large calcareous deposits were found in the upper lobe of each lung which, as later suggested by Dr. Harlow Brooks, probably represented old infarcts. Examination of the blood gave a strongly positive Wassermann reaction.

COMMENT

This case seems of unusual interest because of the absence of pulsation in the superficial arteries of the upper extremities and neck. Osler[1] once saw a case of thoracic aneurysm in which there was obliteration of the pulse in the abdominal aorta, and the femoral and peripheral arteries of the leg, yet the circulation was apparently unimpaired. Dieulafoy,[2] in writing of aneurysm, says, "In some cases total suppression of the radial pulse has been noted," but he does not say that pulsation in both radials was absent. Many causes have been given to explain suppression of the pulse in aneurysm. Strumpell[3] says, in part: "Either the trunk of the efferent vessel is compressed by the aneurysm, or the lumen of the exit of the vessel is itself involved in the aneurysm and hence the opening of the vessel is distorted or contracted, or partly occluded by coagulum."

1605 Eleventh Avenue.

COMPLETE INVERSION OF THE UTERUS

Farquhard Campbell, M.D., Kansas City, Kan.

Mrs. P. M., white, aged 15, housewife, whose personal and family histories were negative, went into labor at 11 p. m., Nov. 2, 1920. There were slight pains during the night which became severe and regular about 10 a. m., November 3, and she was delivered at 11:15 a. m. Labor was normal and very easy, and there were no lacerations of the perineum. The baby, when dressed, weighed 3½ pounds, which would account, at least partially, for the easy labor.

Half an hour after the termination of labor, as she seemed to be flowing slightly to excess, her physician gave a dram of fluidextract of ergot by mouth. Half an hour later she had severe and continuous uterine contractions. Because of the persistence of these, I was called in consultation, seeing her about two hours after the termination of labor, at which time the pain had almost ceased. The uterus was firmly contracted, and because of thin muscles could be seen bulging the abdominal wall. It was easily outlined by the hand. Her pulse was 110, but she was in good condition. I attributed the condition to her susceptibility to the ergot. Convalescence was uneventful, and the patient was in bed until November 14.

November 20, seventeen days after confinement, she got up about 8 a. m., and, while walking across the room, fainted and fell with her abdomen across the seat of a chair. She was placed in bed, regained consciousness quickly, and while not in pain felt somewhat uneasy. About 2 o'clock in the afternoon, thinking that her bowels would act, while sitting on a slop jar, she felt something give way and she fainted. She was placed in bed, and Dr. W. H. Stillwagon found the uterus inverted, outside the labia and bleeding profusely. The bleeding was controlled by pressure with gauze.

I saw her within half an hour. The uterus, about the size of a large orange, was inverted and outside the labia. Bleeding was checked to an ooze and there was evidence of slight shock. I placed the uterus in the vagina as high up as possible and sent her to the Bethany Methodist Hospital.

She was given gas-ether anesthesia, prepared in the usual manner, and the uterus was cleansed with sterile water. The cervix showed a bilateral laceration, deeper on the right side, and a very short cervix, this possibly being exaggerated by the completeness of the inversion.

METHOD OF REDUCTION

The cervical ring was dilated with the index fingers, grasped with three double tenaculum forceps, and placed so as to divide the cervical circumferance into three equal parts. The corpus uteri was gently compressed with the hand and reduction started, by the fingers, of that part closest to the cervix. As the reduction progressed, the fundus came within reach of the thumbs, which were placed on it, causing it to indent. As the fundus of the body went inside the external os, ovum forceps were placed in the indentation, and with gentle pressure the body of the uterus was carried upward in normal position.

The right laceration, which was the deeper of the two, was excised and repaired with twenty day catgut. After the repair the cervical canal was large enough to admit the index finger, thus assuring sufficient drainage. The uterus was packed lightly with iodoform gauze.

Convalescence was rapid and uneventful.

1. Osler: Principles and Practice of Medicine, Ed. 8, p. 853.
2. Dieulafoy: Text Book of Medicine 1: 495.
3. Strumpell: Text Book of Medicine 1: 462.

A SAFE AND EFFICIENT TUBERCULIN TEST

Herbert F. Gammons, M.D., Dallas, Texas

In order to test out the value of the intradermal tuberculin test, seventy patients were given this test at the Woodlawn Sanatorium. In half of the patients 0.001 mg. of old tuberculin was used, and in the remainder, 0.0005 mg. The results with the two strengths were practically the same.

Fifty patients had a very good reaction locally, and two had a slight general reaction which rapidly subsided. Fourteen had a slight reaction locally, three of which reactions were delayed. Six showed no reaction, and all but one of these were clinically not tuberculous, the one having a positive sputum.

All but eight of those showing a good reaction had a positive sputum, and one of these had had a tuberculous kidney removed, while another one had tuberculosis of the bone. The remaining six were clinically tuberculous.

Those showing slight or delayed reaction were either without apparent activity, or else their resistance was very low.

This method of using the tuberculin test seems to be safe and handy; and while in a recent publication I did not favor the use of tuberculin in diagnosis by the general practitioner, still in the light of these results it would appear that $\frac{1}{2000}$ mg. of old tuberculin injected intradermally in those suspicious cases would not be harmful in establishing a positive diagnosis.

The dosage for children from 6 to 14 should be $\frac{1}{6000}$ mg., and under 6 the von Pirquet test is best.

The results with the intradermal test are so marked that there can be no excuse, as a rule, for making a positive diagnosis in the suspects.

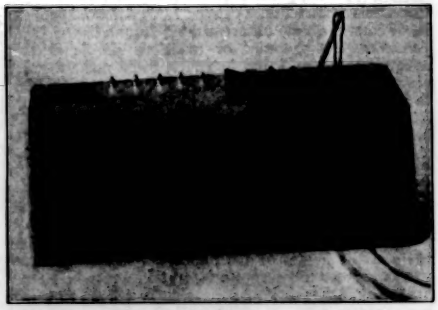
LEAD BLOCK FOR HOLDING RADIUM NEEDLES

CHARLES F. BOWEN, M.D., COLUMBUS, OHIO

Physicians using radium needles appreciate the difficulties in threading them. My trouble has been to hold the needles properly while they are being threaded. It is not a question of the mechanical difficulty of holding them so much as it is of protecting one's fingers while the needles are being threaded.

The accompanying illustration presents a device that has been of the greatest mechanical help and at the same time offers protection from the rays given off by the radium. It consists of a block of lead about 2 inches wide and 4 inches long into which have been made ten holes for holding 100 mg. of radium, distributed in ten needles.

The holes are of sufficient depth so that when the needles are placed in them just the eyes project above the surface of the lead block. The row of holes is placed along the one side so as to give greater thickness of lead between the needles and the operator. If the end of the thread is properly prepared, it can be held in a pair of long forceps and the needles threaded without difficulty. The surface of the block of lead can be used to steady the forceps holding the thread.



Lead block for holding radium needles

After the needles are properly threaded, they can be removed from the lead block and sterilized before being inserted. It is even possible to place the entire block of lead, containing the threaded needles, in a receptacle containing the sterilizing fluid; but in this case the holes in the lead ought to be of sufficient size so that the antiseptic can readily enter and surround the needles. Such an apparatus completely protects the operator and makes the threading of the needles much easier.

344 East State Street.

Professional Radium Injuries.—A communication from the London Radium Institute reports the death of two of the attendants, a woman of 36 and man of 33. Each returned from a two months' or one month vacation with signs of anemia, which proved to be of the pernicious type, with death in two or three months. In a third case, in a man of 50, the fatal anemia ran a still shorter course. They had been employed in the institute for eight, three and ten years; leukopenia was pronounced in all. The anemia was of the type produced by toxic gases, such as nitrotoluene, and rats exposed to the action of radium showed analogous changes in the bone marrow, a total lack of regeneration. Mottram reported these fatalities in the *Archives of Radiology*, December, 1920, and Bordier commenting on them in the *Presse médicale*, just received, warns that other persons in the room with those taking radium treatment are exposed to as many foci of rays as there are radium tubes in use at the time. He adds that tubes for roentgen-ray work are being made to produce rays with constantly greater penetrating power, which enhances their danger for radiologists.

Special Article

SEVEN YEARS OF NATIONAL HEALTH INSURANCE IN ENGLAND

A RETROSPECT

ALFRED COX, M.B., B.S. (DURHAM)
Medical Secretary, British Medical Association
LONDON, ENGLAND

(Concluded from page 1353)

QUESTIONS CONCERNING THE EFFECT OF THE SYSTEM

Having now given a sketch of the difficulties surrounding the introduction of the system, and a slight and rather desultory account of how the medical part of the system is worked, I will pass on to a consideration of the points to which I have been asked to devote special attention, so far as they have not already been dealt with.

1. *What effect has the system had on the practice of the average physician: has it increased or decreased the amount of his professional work?*

If by the average physician is meant the average doctor in an industrial area who has accepted service under the Act, I should say it has increased his work, more particularly the work at his surgery (or office, as I believe you call it). Persons who formerly did not go to the doctor until they were really ill now go for more trifling ailments. They go to him for complaints which formerly were either left untreated or were prescribed for by the chemist. These consultations are encouraged by the far-seeing doctor, who realizes that under a capitation system it pays him to get the patient early. The doctor also has more clerical work to do. The insured patient requires certificates in a form prescribed by the Ministry, and there are records that must be kept and communications of various kinds with the Insurance Committee. Most doctors dislike this clerical work intensely, but some of it is probably having a useful disciplinary effect on many doctors who were very unbusinesslike in their practices and kept no records of their cases. The younger generation will take to it more kindly, but there is no doubt that up to the present time the clerical duties inseparable from any state service have been a great bugbear to the profession.

2. *What effect has the system had on the income of the average physician?*

It has undoubtedly increased the income of the profession as a whole, and especially of those doctors who practice in industrial areas and who formerly did underpaid contract practice (a very large number). Some doctors who formerly made a fair amount of money from the domestic servants of their better class patients complain that they have lost money, because the capitation fees paid on account of servants who are now insured persons are less than the money they used to get in bills from this class, or rather from their employers. I doubt very much that the system has diminished the income of a single doctor in this country. Those who were in industrial areas, and who declined to accept service under the system and have continued to decline, undoubtedly lost money at the beginning. But my belief is that even these doctors have recovered their position. There is and always will be a section of the public who do not believe that they will get effective service unless they pay for it at the time or

by a bill. They do not realize, any more than many doctors yet realize, that capitation fees received from a considerable number, many of whom do not require attendance during any given year, may on the year prove to pay the doctor quite as well as the fee system. A certain, or rather an uncertain, proportion of insured persons, though entitled to the services of a doctor on the panel, go to a private doctor and pay him. This number in most areas is, I believe, comparatively small, particularly where all or nearly all the doctors are insurance practitioners. It is larger in those towns, comparatively few, where a sort of class distinction among the doctors was caused by the split over the Insurance Act and where the idea that the "panel doctor" is an inferior order of practitioner has been fostered. It is necessary to speak plainly on this subject. In the bitterness of spirit caused by the reaction in 1913 when some thousands of doctors who have been "swearing they would ne'er consent, consented" to take service, many things were said which would have been much better left unsaid. The service was declared to be "derogatory"—though nearly 13,000 doctors are working it—a most damaging admisssion often quoted against them. The "yellow press" sedulously quoted every attack on the system, especially when it came from a doctor. Many such attacks were made and are indeed still made, but mainly by men (some of them eminent in the profession) who have never done any industrial practice and do not understand it. The result is that the system is still talked about by some as if it were a very cheap and inferior service, given by unwilling and badly paid doctors to persons who get it as a kind of charity. This kind of thing has rebounded with great severity on the medical profession. It gives a handle still to our "yellow press" and to persons like your Mr. ————, who came over here with the intention of finding out what a bad service it is and had no difficulty in finding plenty of people to fill him up with the kind of thing he was looking for. Let it be clearly understood that there is no charity about this service.

The doctors who are doing National Insurance work in the industrial areas have undoubtedly had their incomes increased. The doctors in the rural areas have also had their incomes raised, first because they are now paid a comparatively respectable capitation fee for many people they formerly attended for nothing or for a wretched club fee; secondly, they have recently gained a good deal in payment for mileage, of which more anon. But the country doctor has not gained as much by the Insurance system as the town doctor, simply because the latter has the chance of a much bigger list.

The doctor in this country is feeling the pinch of present conditions—heavy taxation and inflated prices—as is every other middle class and professional man. But, leaving on one side war conditions, I am bound to say that financially the Insurance Act has been a blessing to the medical profession, who badly needed the stimulus it gave. It practically doubled the amount they were getting from all the people who were formerly attended on a contract basis, which I believe more than compensated for the fact that a smaller number of people who formerly paid bills and paid them well and regularly are now insured persons. The increased income gained from this class and, still more, the certainty and regularity of this income, has had a marked reflex effect on private fees and the remuneration for all other forms of contract medical work. Many a doctor who does no insurance work is today getting better fees for the work he does, simply because the Insurance Act has raised the standard for all medical remuneration.

3. What proportion of his time does the average doctor devote to insurance work?

This, of course, depends on the proportion the insurance work bears to the whole work of any doctor. The best answer to this question is an extract from the case presented last year to the Board of Arbitration appointed to decide what the proper capitation fee should be in the new circumstances—revision of regulations, high prices and increased practice expenses. We suggested that the work arising out of a list of 1,000 insured persons would give the doctor about fourteen items of work in a day, if it be assumed that 300 days only will be worked. If Sundays and holidays be included and work spread over all the 365 days, the number will of course be less than fourteen. The visits in this number of fourteen would be rather less than four, and there would be about nine or ten attendances at the surgery. To this must be added the time necessary for making notes and records and for professional correspondence. A list of 1,000 *potential patients* is, of course, a very different thing from a list of 1,000 *patients*. Yet ignorant or malicious people in this country, and also I find in yours, often make a great play with "doctors with 3,000 patients," etc., seeking to make the public believe that a doctor with a list of 3,000 (and there are not many of them, for, as I said before, the average list is less than 1,000) would be absolutely overwhelmed with work. As a matter of fact, a doctor with 3,000 persons on his list would have an average of 3.8 attendances per insured person in a year, that is, a total of 11,400 attendances in a year. If we leave out the Sundays, he would have about thirty-seven attendances a day, of which ten would be visits at the homes of his patients, and twenty-seven attendances at the surgery. For this work he would have £1,650 a year. As he would almost certainly have private work in addition, he would be well able to employ assistance.

4. What is the average fee per call received by the doctor, and does mileage enter into this?

The payment per call should vary with the nature of the call. The majority of the calls are attendance at the surgery, and a number of these are simply attendance for the purpose of getting a certificate; there may be special or night visits (the doctor being of course obliged to go to these just as in private practice); dislocations, fractures, minor operations and attendance at miscarriages on insured women are all included. There are no figures to show what proportion these special items bear to the ordinary items except those of the payment per attendance areas. The following are the Manchester figures for 1915:

Attendances at surgery	1,041,148
Visits	198,736
Special visits (i. e., a visit paid in response to a call received after the doctor has gone out on his rounds)	5,075
Night visits (8 p. m. to 9 a. m.)	488
Operations (minor surgery)	230
Fractures	116
Dislocations	17
(It must be remembered that many cases included in the last three items go to the hospitals for treatment)	

The average attendances being 3.8 per insured person (*not* per patient), and the capitation fee being now 11s., it will be seen that the average fee per item is about 2s. 10d., and that by far the greatest number of items are attendances at the surgery. The capitation fee includes any visiting within 2 miles of the doctor's

residence or surgery. Any attendance beyond this radius is paid for out of a special Central Mileage Fund, which was £44,000 for the whole of the country (England, Scotland and Wales) from 1913 to 1918 (additions in the way of war bonus being made for 1919-1920), but was raised to £300,000 for England and Wales, with £65,000 for Scotland in 1920. This great increase was brought about by the persistent fighting by the British Medical Association instigated by the country insurance practitioners, who realized that they were at a great disadvantage as compared with the town man. Their lists were small, and the early Central Mileage Fund was distributed only among the doctors who practiced in specially difficult or very sparsely populated areas. The rural doctors insisted that the time which they spent on paying their visits to patients who resided over the normal 2 mile limit should be paid for as well as the actual expenses incurred in travelling.

Their claim was admitted by the government, and the method of satisfying it was submitted to a Government Committee on which representative rural doctors nominated by the British Medical Association sat, with the result I have mentioned. The distribution of the money is dealt with by the central Committee, a permanent body dealing with the distribution of the whole Central Fund to the Insurance Committees, as well as the Central Mileage Fund. This Committee settles annually what proportion of the total shall be allotted to each insurance area, and the amounts depend on the information provided by the Panel and Insurance Committees, and the experience of the past year. The money allotted to each area is distributed locally by the Insurance Committee to the individual doctors who have earned it, on a scheme based on the number of patients on the lists of the local doctors, drawn up by the Panel and Insurance Committees in consultation, and approved centrally by the Ministry. It is too early yet to say whether the amount now allotted for mileage will be deemed sufficient by the country doctors, but it is obviously a great advance on previous remuneration, and the existence and composition of the Distribution Committee is a guarantee that the claims of the country doctor will be dealt with by men who thoroughly understand the position.

5. *What effect has the system had on the professional morale of doctors?*

This is a most difficult question to answer, and leaves room for very different opinions. I will give you my opinion in the firm belief that it represents that of a very large number of doctors who have experience of the system.

I do not think the time has arrived for a very definite answer. Violent changes in the habits and customs of a profession, particularly when accompanied by bitter political feeling, are likely to cause violent reactions. I do not think we have settled down yet. There are still persons of some influence, and some newspapers in this country, who seem to think the Insurance Act fair game for attack, and a sure draw when other political material is scanty. I do not believe you will find one serious politician or one member of the medical profession who studies the political horizon who does not think that the Insurance system has come to stay—subject, of course, to the evolutionary process through which all political and economic systems have to go. A section of the Labor Party wants a whole-time salaried medical service, but to my mind this is not at present a question of practical politics. It would cost a great deal of money and we have not the money. It would mean a great increase in bureaucracy, and the country is beginning to hate bureaucracy like poison. And I do not believe the working classes would stand a whole-time government medical service.

During the two years' campaign preceding the operation of the Act and the seven years which have since elapsed, the medical profession came collectively into the public eye a good deal more than it had ever been. Its traditions and internal economy were exposed to the public gaze in a manner which seemed almost indecent. The profession, which people had vaguely thought lived mainly on its reputation as a "noble profession" and the gratitude of the people who could not pay, was discovered to be as amenable to ordinary economic laws as anybody else. Its income and demands for remuneration were discussed in every newspaper and at political meetings all over the country. When we got over that we found that we were now to be in close relation, on the method of conducting our practices and on money matters, centrally with a Government Department and locally with the Insurance Committees. Besides that we had the Approved Societies watching us jealously, for on the vigilance and honesty of the doctors depended the financial success or bankruptcy of their part of the business. Every doctor's certificate was virtually a cheque on their sickness benefit funds, and they were irritated to feel that they depended so much on what we might or might not do, while they had no control over us, or only a very indirect control, exercised through the Insurance Committees. Gone were the days of patronage when a few members of each Society could decide what doctor would attend (or at any rate draw the money for) all their members. Every doctor now had a right to be on the list, and the individual selected his own doctor from that list. The doctor could no longer be got rid of at a few months' notice. No wonder that for the first two or three years the position was very uncomfortable.

Incidentally, I may say that the valuations of the funds of the Approved Societies, now being completed by the government, shows that financially the system is a great success. Most of the Approved Societies have handsome balances which will be devoted to extra benefits, among which nursing, dental treatment and hospital treatment seem to be the favorites in the discussion now going on as to how the money shall be spent. The people in this country who were telling us a year or so ago that the Act was bankrupt are "lying low and saying nuffin" at present. They must be thinking quite hard.

The new restrictions on the doctor caused by the certification rules (much stricter than those of the old Friendly Societies) and the necessary (sometimes, as we all thought, the unnecessary) rules and regulations, made many of the doctors very restive and there was a good deal of friction and bad feeling which had its effect on the morale of the profession and sometimes a very bad effect. I am amazed that things have settled down as well as they have in nearly every area. The present good relations between the Insurance Committees and doctors which exist in nearly every area are a wonderful testimony to the British habit of "worrying through," and to the wisdom and tact of those individuals on each side who gradually evolved order and good feeling out of chaos and bad temper.

Undoubtedly the system has had the effect of making doctors talk more *in public* about money, and this has

had a bad effect on their status in the public eye, though I think only a temporary one. The methods of payment were at first very defective. Nobody had ever had to work a system which called for the payment of 13,000 doctors in 200 areas of a sum based on counting the heads of some 14,000,000 people, constantly moving about. It was not made clear at first that a doctor could not expect to get a full year's payment for every person who got on his list—it might be only for a few weeks—and many doctors were puzzled and wroth when they could not square their receipts with the number of names on their lists. The lists were most defective. Insured persons could not be traced. The administrative work of some Insurance Committees was much more efficient than others, and the result was that for six years, until experience had shown the defects of the old system and pointed the way to a better, we were constantly complaining, in public, that we did not get the money to which we were entitled. We got the reputation of always thinking and talking about money, and there is no doubt that the necessity of doing this (and it *was* necessary, for we could not have got an improved system, as we have done, without it) did not improve our public status, and I do not think it had a wholesome effect on that large section of the profession which had to indulge in it.

But this factor is a temporary one. The money question is not as acute as it was, and if I am right in thinking that it will not occupy such a prominent position in future I am inclined to think that the influence of the system on the morale of the profession will be on the whole to the good, for:

1. A secure income has a beneficial effect on most people. The Insurance system gives doctors the certainty of a quarterly cheque, without eliminating enterprise and competition. Patients can change their doctor, and there is also a large field left for private practice.

2. The system has compelled doctors to work together more. In Panel Committees and at meetings of insurance practitioners they have to discuss administrative affairs: they have, under their agreements, to deputize for one another in emergencies; all those who work the system feel they have interests (and grievances) in common, and I am convinced that there is more solidarity in that section of the profession than there ever was before in any considerable section of the profession. Against this must be offset the class division which was set up in some areas between the doctors who did and those who did not accept service. But this was never pronounced except in a few areas, and is fast disappearing in most, if not all. Moreover, doctors who are able to see further politically than the end of their nose are convinced that there will be further developments of medical service under the aegis of the government, in which every member of the profession will be involved—consultants as well as general practitioners. Therefore, I believe that within measureable distance the improved solidarity of the profession, already noticeable among those working the insurance system, will invade all other sections.

I hope that my American readers will remember what some of the critics of the system have forgotten: that the doctor who does National Insurance work is a general practitioner first, with all of the instincts and all of the interests of a general practitioner. He happens to be doing this kind of work; but to nine men out of ten it is the lesser part of their practice.

6. What effect has the National Health Insurance system had on scientific research?

It cannot be said that it has had any direct effect, but it must be put down to the credit of our Insurance Act that it was the means of setting up the first real state endowment of medical research. Section 16 (2) (b) of the Act of 1911 provided that 1d. for each insured person should be retained by the Commissioners for purposes of research. In 1914 a sum of about £55,000 was available for this purpose. The Insurance Commissioners of England, Scotland, Wales and Ireland jointly set up a Medical Research Committee, which included Lord Moulton, F.R.S.; Dr. Christopher Addison (now Minister of Health); Mr. Waldorf Astor, M.P. (now Lord Astor); Sir T. Clifford Allbutt, M.D., F.R.S., Regius Professor of Physic, University of Cambridge, and President of the British Medical Association; Mr. C. J. Bond, F.R.C.S., of Leicester; Dr. William Bulloch, Professor of Bacteriology, the University of London; Dr. Matthew Hay, Professor of Public Health, Aberdeen University; Prof. F. G. Hopkins, Reader in Chemical Physiology, University of Cambridge, and Sir W. B. Leishman, F.R.S., Professor of Pathology, Royal Army Medical College. With this Committee was associated an Advisory Council for Research, containing the names of many men eminent in the medical world. On the strength of this money and out of this beginning has arisen the Medical Research Council, which now has no direct connection with the National Insurance system or with the Ministry of Health but is under the Privy Council and is regarded as the body for conducting all kinds of medical research on behalf of the government as a whole, or any department of it. The work of this body during the war has been recognized as being brilliantly successful.

7. What effect has it had on the public health?

I do not know of any statistical evidence bearing on this point: probably it is too early yet to expect any. But I am as certain as I can be of anything that the existence of a plan of medical attendance which covers 14,000,000 workers, which makes it pay the doctor not to have the patient ill at all, and pays him to prevent a slight ailment developing into a greater, is bound to be reflected sooner or later in the death rate and the incidence of sickness. It will not tell heavily for some time yet, for many of the older doctors have not yet got used to the new system sufficiently to change their outlook, and the war has prevented a sufficient influx of the younger men to make any material difference yet. We as a profession have always urged that patients should be encouraged to go early to the doctor so that their ailments may be diagnosed early. We in Britain have got our wish as regards a considerable section of our population. Our professional instincts and training would alone lead to advantage being taken of this opportunity; and when professional instinct and self-interest coincide, I have no doubt as to the result.

One of the obligations put on the doctor by his agreement is that he shall keep such records of the diseases of his patients as are required by the Ministry of Health. When the Act first came into operation, a form of record was introduced which showed the number of attendances given to the patient and the nature of his disease. But in order that professional secrecy might not be violated, when the doctor returned his records, as he did at the end of the year, he separated the two parts of the record so that the part which gave the nature of the disease did not give the name of the

patient, and one part went to the Insurance Committee and the other to the Ministry of Health. The record was therefore useless for clinical purposes, as it was lost to the doctor at the end of the year. It was, in fact, quickly discovered to be of very little use for any purpose, so that when it was dropped during the war in an attempt to relieve the doctor of as much work as possible, it disappeared "unwept, unhonored and unsung." The Ministry did not attempt to revive it, but last year appointed a very strong Committee, consisting of statisticians, administrative experts, and doctors experienced in National Health work, to try to devise a new form of record which should be useful clinically, administratively and statistically with a special regard for its clinical value. The Chairman of the Committee was Sir Humphry Rolleston, F.R.C.P., whom many of you in the States know. A new record was produced and came into use, Jan. 1, 1921. It is designed to serve as a continuous record of the health of the patient, and it will remain in the hands of the doctor unless the patient removes (in which case it goes to the new doctor) or dies (in which case it goes to the headquarters of the Ministry). The doctor is under an obligation to keep a record of the attendances and visits given, and of any first and final certificates given. He must put down any clinical notes and diagnoses that he thinks will be of service either to himself or to any succeeding doctor into whose hands the record may come. This record is new and is being subjected to pretty severe criticism at the hands of some of the doctors who will have to keep it, and of certain newspapers which have attacked it. The Conference of representatives of Panel Committees, which meets yearly or oftener under the auspices of the British Medical Association and is directly elected by the Panel Committees of the country, resolved last October to pass no opinion, either favorable or unfavorable, until the record had had a trial. During that trial we shall all be criticizing the new form and possibly we may find that some of the work entailed by it is useless—in which case I have little doubt the form will be modified. But we shall have for insured persons what we have never had before for any section of the public and what the profession has often wished for, namely, a continuous record of the incidence of sickness for each insured person so far as the doctor, at his discretion, thinks a clinical record necessary. This may prove invaluable. On the use to the doctor and the patient of a record of diagnoses and clinical notes there can be no serious division of opinion in the profession. To know the previous medical record of the patient who comes to him as a stranger is a great asset to the doctor and also to the patient, whose memory and intelligence cannot be relied upon to give the doctor that information as to the past which is often invaluable.

I said that some newspapers had attacked this new record; and though I don't want to trouble our colleagues in the States with our political affairs, this incident is so important that I must dwell on it, for it illustrates one of the greatest disadvantages that a National Health Insurance system has brought to the British medical profession and will bring to the profession in any other country where it is tried. *It renders the profession much more liable to be used as a pawn in a political game.* All through the Insurance Act fight the enemies of the author of the scheme, Mr. Lloyd George (and they were much more numerous then than now), used the medical profession as much as they could to defeat him. It was not clearly seen then that this kind of thing was likely to be permanent. Recently a certain section of our press which wants to get rid of Mr. Lloyd George came to the conclusion that one of the weakest spots in his armor was the Ministry of Health. It is a new Ministry, it has a large number of officials, some of its work entails the issue of numbers of regulations, many of its schemes would need much public money. A section of the press seized hold of the growing public horror of bureaucracy and its desire for public economy, and commenced a series of venomous attacks on the Minister of Health and his officials. It ranged through an attack on (1) the number of charwomen employed at the Ministry; (2) a number of new medical officers appointed (these appointments had been hung up since 1914); (3) a miscellaneous bill the Minister brought in dealing with a number of things, some small, some important; but finally fastened on (4) the new record. This was accused of being a gross violation of the secrecy which should prevail between doctor and patient, and first in one paper and then in another, this section of the press did its best to rouse the public against the Minister of Health and thus get at the Prime Minister. Up to the moment the press agitation started there had not been a murmur from the profession, but it was not long before individual doctors fell into the trap and began writing to the papers or giving interviews in which they supported the agitation. The profession as a whole refused to be moved, and after a few weeks' agitation the matter, so far as its political usefulness is concerned, is as dead as a doornail. But it was sufficient to show the "yellow press," if it needed any showing, that the Insurance Act is still a potent political weapon and that the medical profession may at times prove quite useful in a political stunt. This is a new development for us, but it is a permanent factor to be reckoned with. The more the profession comes into contact with the State, especially when it is being paid by the State, the more likely it is to be used for political purposes and the more likely it is to lose caste with the public. I say deliberately that whenever the profession is dragged into a public controversy in which party politics is involved, it loses professional prestige.

8. *What is the opinion of the profession of National Health Insurance after its experience of it? If the matter were put to a vote would the majority of the profession in Great Britain be in favor of continuing or going back to the conditions which prevailed before the adoption of the system?*

Opinions about the system in the medical profession are very mixed. Many, probably the majority, of the doctors who are not working it and have little more than theoretical knowledge of any form of contract practice will tell you it is bad. Quite a considerable number of doctors think that no form of contract medical practice can be good. They believe that the mere fact of the doctor being paid the same amount whether he sees his potential patients frequently or seldom, or not at all, has a bad effect on his work. I do not think so. If you grant that the terms of the contract, both financial and other, are reasonable, I see no reason why a doctor should not do quite as good work for money earned by contract as for money earned in bills. Moreover, I know many doctors in this country who do *all* their work by contract and do it well; most of the doctors in the colliery districts, for example. They are as good all round practitioners, taking them in the average, as you could wish to see. You will find a small number of

doctors who have had experience of the old club practice who will tell you that they would rather have the old system, because it gave them more liberty. They had no government control, no supervision, no red tape. My own opinion is that not one of these would go back to the old system if the choice became a matter of practical politics which, thank heaven, it never can. Whatever faults there may be in the present system, when I compare it with the old club system at 2s. 6d. to 3s. 6d. per head per year; with doctors tumbling over one another in a horrible dutch auction to get clubs even at that price so as to keep competitors out; with the bribery and corruption that went on in connection with the election of doctors to these clubs; with the fact that the minority in the clubs who didn't like the doctor chosen by the majority had no choice unless they paid private fees—when I compare all this with the present system—every doctor who chooses taking a part and getting those patients who care to select him; the remuneration nearly three times what it used to be before the Act came in (or in prewar money at any rate double); and the real share that the doctors through their Panel Committee have collectively in the administration of the service—I have no hesitation about my verdict. I can confidently say that not one doctor in 1,000 who is doing National Health work would willingly go back to the old system, if the choice were put to him as a practical proposition to which he must give an answer.

That is not to say that the majority of doctors who are working the system are entirely satisfied with it. Satisfaction would be pathologic in connection with such a gigantic experiment as this. You could not change the habits and conditions of practice of 13,000 doctors by an Act of Parliament introduced in circumstances calculated to produce the greatest possible prejudice against the new system, and expect satisfaction. But inasmuch as doctors have a considerable and increasing share in working the administration of the system and in shaping its future, my opinion is that it is probably as good a form of contract medical practice under state control as you could get in the time, never forgetting that we have had a big war which has interfered with normal developments.

I am ending as I began. If you can ensure that all your population can get the medical attendance they need without charity and without an insurance system, my advice would be, Don't encourage a compulsory state medical insurance scheme. If, on the other hand, you have any considerable section of your population that cannot get the medical attendance they need without resort to medical charity (either the organized kind generally known as medical charity or the unorganized kind known as not paying the doctor), then it seems to me the state ought to organize some provision for them and the medical profession should help. I do not believe it is the duty of the medical profession alone to organize and run such a system. Doctors are trained to practice medicine, not to run big insurance schemes, and their time could be better used in their own work than in doing, less well, work for which actuaries, accountants and business men are needed.

Nor would I advise that the organization should be done by insurance companies or other private corporations. Doctors can get, as we here know by experience, a considerable share in the administration of a state scheme, and can exercise a very great influence on its line of development. But they would certainly not get such a position in any scheme run for a profit by an insurance company or a combination of such. Their scheme would be run by their directors, business men who would never dream of leaving the medical side to be run by medical men who were employed under the scheme. I believe that the doctor can exact his proper share in the administration of a big scheme of this kind far more easily from the state than he could from any system of private enterprise.

OBJECTIONS AND DESIRABLE MODIFICATIONS

And now for your Editor's last question:

What are the principal objections made to the plan as at present administered and what modifications in the plan should be adopted?

We must leave aside as impracticable those objections which are raised by those who object altogether on *a priori* grounds to contract work, or by those who have no objection to state money but want it without any state control.

I suppose that if responsible and experienced doctors were given a free hand to alter our system here, they would wish chiefly to make it more comprehensive, that is to say, to provide the insured persons with a really complete medical and auxiliary service—doctors, specialists, nurses, institutional treatment, etc.—to have a service which would be a credit to all concerned.

They would wish to increase the payment to the doctor so as to make it possible for him to make a good income out of a more limited number of potential patients. But they would realize that this would mean more restrictions on the individual doctor. The state could not pay a larger fee for the express purpose of getting a better service without making sure that it got value for its money. This would entail more inspection, and I am not sure that the last state of the doctor (and probably of the patient) would not be worse than the first.

They—the doctors who have been through it all—would desire to have the local administration of the service placed in the hands of a better body than the present Insurance Committees. The Insurance Committee has no real link with the local authority which controls all the other health agencies in the town or county. For example, the Town Council of a County Borough controls all the sanitation of the town, runs the infectious diseases hospital, controls maternity and child welfare schemes, has a special responsibility for the health of schoolchildren, but it has no real link with the Insurance Committee, which controls the domiciliary medical services for these men and women who are insured. One of the pressing problems of our Ministry of Health is how to bring into being one Local Health Authority which shall combine all the health functions of all the existing authorities. Old traditions and vested interests make this one of the toughest jobs any government ever tackled.

Another thing the medical profession wants is to have a still greater share in the administration of medical benefit. As I have previously indicated, this is gradually being granted; but we should long ago have had what we now have, and much more, had the author of the scheme consulted the representatives of the profession at an earlier stage of the proceedings than he did. One would think that it would be the first desire of any government department to gain the cooperation of those who will be mainly responsible for carrying out any such scheme as we are now considering. But, as a matter of fact, government departments learn this lesson very slowly. If there should be any likelihood

in any of your States of the establishment of a state system of health insurance, I would urge our American colleagues to insist on being consulted *before the scheme gets to the stage of crystallization into a bill*, and to make themselves thoroughly unpleasant to any department, party or person who tries to deny what should be an elementary right.

We are of opinion that some of the restrictions placed on those who are working the system are unnecessary, and we feel that only constant vigilance on the part of an organized profession can ward off much more of this kind of thing. For example, a recent change in the doctor's agreement lays it down that if he is going to be away for more than a week he must give notice to the Insurance Committee of the arrangements he has made for getting his work done. Also, the Insurance Committee has power to make inquiries into the accommodation the doctor provides in his waiting room and surgery. These restrictions have no doubt been imposed on all the doctors because a few have been careless or negligent, or have made insufficient provision for their waiting patients. The fact is, of course, that in any large system of this kind the average man who does his duty will have to suffer because a minority do not do the work for which they are paid. But the situation is not quite so bad as it looks. There are hundreds of laws passed for the restraint of wrongdoers of which the average man remains in blissful ignorance, and so it is with some of the restrictions and regulations of our insurance system. For all practical purposes to the great majority of the doctors they don't exist.

Nevertheless, there is nothing more certain than that, unless they are watched and resisted, administrators tend to multiply rules and red tape, not out of malice aforethought but because it is a way they have. One of the chief lessons the Insurance Acts have taught the profession in this country is that a strong and vigilant fighting organization is as essential to the medical profession as to every other calling or trade. As a consequence of our experience of the Insurance Act and its administrators, the British Medical Association is stronger, more representative and more capable of defending the interests of its members than ever it was before.

CONCLUSION

I am conscious that in what I have said I may have missed some of the questions American doctors would like to ask, simply because I do not know their special difficulties or how American conditions would modify any health insurance scheme that might be set up in one of your States. I shall be very glad to answer any questions which these remarks may elicit, and I ask your readers to accept what I have said as the honest attempt of a man with special experience to say what he thinks is the opinion of the average member of the medical profession in England about our National Health system.

Organisation of Hospital Social Service.—Social service should be organized as a department of the hospital, dispensary, or other institution. Assistance or participation by outside individuals or agencies in starting a social service department may well be accepted, but the department should be placed from the beginning, or the earliest possible date, under the complete administrative control of the trustees or other governing authority of the institution. No other arrangement can be deemed permanently satisfactory.—*Hospital Social Service* **3**:5, 1921.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION. W. A. PUCKNER, SECRETARY.

MERCUROCHROME - 220 SOLUBLE. — $NaOOC.C_6H_2Br_2.O.C_6HBr(ONa)(HgOH).3H_2O$. — The disodium salt of dibromo oxymercury fluorescein, containing 23 to 24 per cent. of mercury.

Actions and Uses.—Mercurochrome-220 soluble is a strong and rapidly acting germicide; it is active in urine, a 1:1000 solution killing *Bacillus coli* and *Staphylococcus aureus* in this medium in one minute. It penetrates the tissues readily. The drug is tolerated in a strength of 1 per cent. by the bladder, renal pelvis and urethra; a 2.5 per cent. solution applied to the anterior urethra causes only temporary discomfort. The toxicity, when tested by intravenous injection into rabbits is rather high, 10 mg. per Kg., invariably causing death within 24 hours and 5 mg. causing a decrease in phenolsulphonephthalein output and an albuminuria which lasts about a week. Dogs are more resistant. No systemic effects have been observed following its local application in the human. Mercurochrome-220 soluble has been used in cystitis and urethritis and in chancroidal ulcerations; also in affections of the eye and ear, such as ophthalmia neonatorum and otitis media.

Dosage.—In the treatment of infections of the kidney pelvis, the ureters are catheterized and the pelvis gently filled with a 1 per cent. solution; the catheter is plugged and the solution retained for five minutes. In the treatment of bladder conditions, one ounce of the 1 per cent. solution is introduced into the bladder and retained for one hour or longer, the treatment being given daily or on alternate days, or at longer intervals according to circumstances. In anterior gonococcus urethritis, the anterior urethra is filled with a 1 per cent. solution and the solution retained for five minutes. If the posterior urethra be involved, the solution is gently retained for an hour or more. In rare cases, considerable irritation is produced, particularly in those with residual urine. Later, in the treatment of acute anterior gonorrhea, a 2.5 per cent. solution is used every three hours. In chancroidal ulcerations, the drug is applied as a moist dressing (1 per cent.) or as a starch paste (5 per cent.) or as an ointment (5 per cent.). The results have been satisfactory and no untoward effects observed. In ophthalmia neonatorum a 2.5 per cent. solution is freely instilled in each eye several times a day.

Mercurochrome-220 soluble is incompatible with acids. The aqueous solution stains the skin red but the discoloration may be removed by a washing in a solution of sodium hypochlorite.

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Mercurochrome-220 soluble occurs as iridescent, green scales or granules; odorless; permanent in the air. It is freely soluble in water; soluble in 65 parts of alcohol; insoluble in chloroform or ether. On incineration mercurochrome-220 soluble yields an ash containing sodium bromide and sodium carbonate.

The aqueous solution (1-10) of mercurochrome-220 soluble is of a deep cherry-red color; on dilution with water it becomes fluorescent. The aqueous solution is stable in the air, does not precipitate proteins and does not respond to the usual tests for mercury ions. Add a few drops of hydrochloric acid to about 10 Cc. of an aqueous solution of mercurochrome-220 soluble (1-100). An orange-red precipitate is given and, if the mixture be filtered, the filtrate is nearly colorless, or only slightly yellow.

Dry about 1 Gm. of mercurochrome-220 soluble, accurately weighed, to constant weight over sulphuric acid. The loss does not exceed 10 per cent. Dissolve about 1 Gm. of mercurochrome-220 soluble, accurately weighed, in about 50 Cc. of water at 50-60 C., filter through a weighed Gooch crucible, wash the residue thoroughly until the washings have only a slight color, dry at 110 C. and weigh. The insoluble matter amounts to not more than 0.2 per cent. of the weight taken. Place about 0.2 Gm. of finely powdered mercurochrome-220 soluble, accurately weighed, in an 800 Cc. Kjeldahl flask and slowly add 10 Cc. of sulphuric acid, in such a way as to wash down any adherent particles. Mix the materials carefully, heat to a temperature of from 60 to 75 C., remove the flame and add, little by little, finely powdered potassium permanganate, mixing thoroughly after each addition, until the presence of a considerable excess of brown manganese compounds is noted. The appearance of a slight flame after the addition of each portion of the oxidizing agent is immaterial. Cool the mixture to room temperature, add 100 Cc. of water, then gradually add powdered oxalic acid with shaking until the solution becomes clear. Filter if necessary, make the volume to about 200 Cc. with water, pass in hydrogen sulphide, collect the precipitate in a Gooch crucible, dry at 100 C. and weigh. The weight of mercuric sulphide corresponds to not less than 23 per cent. of mercury.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 NORTH DEARBORN STREET - - - CHICAGO, ILL.

Cable Address - - - - "Medic, Chicago"

Subscription price - - - - - - Six dollars per annum in advance

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SATURDAY, MAY 21, 1921

THE EXPERIMENTAL PRODUCTION OF CANCER

The period of active experimental research on the problems of cancer growth is now of about twenty years' duration, having received its initial stimulus from the independent observations by Leo Loeb in this country and by Jensen in Denmark, that spontaneous tumors arising in rats and mice, may, at least under certain conditions, be transplanted from animal to animal in series. Investigation of such transplanted tumors has engaged students of cancer ever since that time, and much has been learned concerning the biology of the cancer cell by this means. Less positive information than was expected has been obtained concerning the etiology of cancer. Most of the evidence furnished by study of transplanted mammalian cancers has been interpreted as indicating that they probably are not the result of infection produced by some specific cancer parasite, whereas the transplantable, sarcoma-like growths of fowls, found by Peyton Rous to be transmissible by cell-free filtrates, suggest the existence of just such specific cancer parasites. A fundamental limitation of the usefulness of the transplanted tumors as a source of information lies in the fact that they are far from being identical with spontaneous tumors. They merely represent artificially produced metastases of the tumor of one animal into the tissues of another, and are always growths of cells derived from the cells of the original tumor animal and not the cells of the host. The spontaneous tumor, of course, represents growth of the tissues of the animal that bears it. The inoculated animal, in all probability, would never have had a tumor of its own tissues. Hence the conditions must be quite different from what they are in the animal that suffers malignant transformation of its own tissues. As evidence that there is such an essential difference, a large proportion of implanted tumors may undergo spontaneous disappearance and cure, which apparently never happens with spontaneous malignant tumors.

Of late, more and more attention has been given to the experimental production in animals of spontaneous tumors, which presumably will give more useful information, especially concerning the question of etiology. Several apparent successes have been registered, which stimulate further study and promise valuable addition to our knowledge of this baffling problem. So far the successful experiments have been obtained in two ways: either by imitating conditions that are known to produce cancer in man, or by taking advantage of conditions that have produced cancer in animals. In the first group comes the production of tumors by long continued stimulation of tissues by chemical or physical agents. Among these, perhaps the most striking results have been obtained by Japanese investigators. Applying the recognized fact that cutaneous cancers occur with particular frequency in those much exposed to tar, Yamagiwa [1] and his associates painted coal tar on the inner surface of the ears of rabbits every two or three days for long periods, with the result that great overgrowths of epithelium were produced which sometimes manifested all the histologic and clinical features of malignant cutaneous cancer, even to the production of metastases in the regional lymph glands. These positive results have particular significance from the fact that spontaneous skin cancers have never been observed before to arise on the ears of rabbits, and hence coincidence is out of the question as an explanation for these growths. More recently, Tsutsui [2] has produced cancer in the skin of mice by the same means. Coal tar was painted frequently on the backs of 259 mice, of which only sixty-seven lived more than 100 days, sixteen developing carcinoma and one a sarcoma. As two of the epithelial growths produced lung metastases, the true cancerous nature of at least some of the growths is certain, although proper objection to too ready acceptance of epithelial infiltration alone as sufficient evidence of true malignancy has been raised, especially by Bullock and Rohdenburg.[3] The latter danger is particularly shown by the infiltrative growths of epithelium that are produced by the injection of fat-soluble dyes, such as scarlet red, which often resemble the histologic picture of carcinoma almost perfectly; yet they disappear spontaneously when the exciting agent is removed or exhausted. Despite the extensive epithelial growth produced by fat dyes, the production of true carcinoma by this agent seems not yet to have been accomplished in a conclusive manner. Even repeated injections of scarlet red oil into the mammary glands of rabbits by Takeuchi [4] did not produce carcinoma. A possible exception is furnished by Yamagiwa and Ohno,[5] who injected scarlet

1. Yamagiwa, K., and Ichikawa, K. (J. Cancer Res. 3:1 [Jan.] 1918) summarize work reported in Japanese. The Experimental Production of Cancer, editorial, J. A. M. A. 68:1818 (June 16) 1917.

2. Tsutsui, Hidejiro: Ueber das künstlich erzeugte Cancroid bei der Maus, Gann 12:17 (July) 1918.

3. Bullock, F. D., and Rohdenburg, G. L.: J. Cancer Res. 3:227 (July) 1918.

4. Takeuchi, Misao: Ueber die Veränderungen der Milchdrüsen der Mäuse nach Scharlachrotoliveröleinjektion, Gann 11:47, 1917.

5. Yamagiwa, K., and Ohno, S.: Ueber das Resultat des Experimentes zur künstlichen Erzeugung der Epithelialgeschwülst aus dem Hühner-Eileiter, Gann 12:3 (May) 1918. Recently Yamagiwa has produced suggestive growths in the mammary glands of rabbits by injection of tar-lanolin mixtures (Mitt. med. Fak. Univ. Tokio 22:1, 1919; Gann 15:1 [Jan.] 1921).

red oil into the uterine walls of forty-one fowls and obtained three with adenocarcinoma. Here the uncertainty lies in the fact that abdominal carcinoma is occasionally observed to arise naturally in fowls. However, since continued mild stimulation of cell growth seems to furnish the most favorable means for inciting cancer formation, it seems probable that such proliferations as result from the fat dyes may develop into true cancer when other circumstances are favorable. As analogy we have the well-established influence of the irritation of the bladder by anilin or its compounds in dye workers, in the production of "dye workers' cancer." [6]

The first striking successful attempt to produce tumors experimentally by reproducing the conditions in which they have been found to arise in animals was reported by Fibiger.[7] Observing that cancer of the stomach occurred frequently in the stomachs of rats that had eaten roaches infected with a parasite (*Spiroptera*), he fed rats such infected material purposely and obtained a certain number of animals with what seemed to be true carcinomas resulting from the irritation caused by the parasites in the stomach. More recently there has been reported from the George Crocker Research Fund of Columbia University the occurrence of growths in the livers of rats infected with tapeworms, the hepatic cysts stimulating the formation in the tissues about them of neoplasms that have all the characteristics of sarcoma. Since these growths develop in a much larger proportion of infected animals than is the case of Fibiger's spiroptera-infected rats, they may be correspondingly more useful in the study of cancer, but suffer the disadvantage of being sarcoma rather than carcinoma.

Another method of producing spontaneous tumors in mice seems to be established by the studies of Maud Slye on the influence of heredity on the incidence of tumors in mice. According to Miss Slye's more recent observations,[8] it is possible not only to produce stocks of mice with a high and fairly constant incidence of tumors, but even to obtain strains of mice with a tendency to produce certain types of tumors, as sarcoma; or tumors of certain organs, such as liver tumors, lung tumors and mammary gland tumors. While the method of selective breeding seems able to produce an abundance of tumors and a choice of type or location of the growth, it involves too many years of breeding and selection to make it readily available at present, although it is possible that in the future it may find wider adoption as a means of producing stocks of animals with a high and calculable incidence of spontaneous tumors of different site and type.

It is to be noted that none of these methods of production of spontaneous tumors depend on the existence of any form of specific cancer parasite. Either inheritance, or the chronic stimulation of cell growth by mild irritation, or the cooperation of both factors, seem to be the determining influences. On the other hand, we are still a long way from finding an agent or method that will produce a cancer in every animal to which it is applied.

6. Dye Workers' Cancer, an Important Industrial Disease, editorial, J. A. M. A. 75: 321 (July 31) 1920.
7. Fibiger, Johannes: J. Cancer Res. 4: 367, 1919; review of his methods and results.
8. Slye, Maud: J. Cancer Res. 1: 479 (Oct.) 1916.

CARRIERS OF THE PATHOGENIC AMEBAS OF DYSENTERY

Until quite recently amebic dysentery was assumed to be almost exclusively a tropical and subtropical disease. It has rarely been epidemic in temperate zones, although outbreaks of moderate size have occurred, notably in the German Army in East Prussia in 1901. It should, perhaps, not be surprising that dependable information on this subject has until lately been so scanty, for the differentiation of a variety of dysentery as amebic in origin is scarcely more than half a century old. It was not until 1875 that Lösch first accurately described the ameba which he found in the dejecta of a patient during life and in the intestinal lesions at necropsy.

The World War created new possibilities for the dissemination of diseases formerly believed to be restricted to comparatively narrow, circumscribed geographic areas. In the intermingling of races, infectious agents are distributed in unexpected, not to say unsuspected ways. While old enemies like typhoid, cholera and even typhus have been mastered where medical science had a free hand, new menaces have crept in under unanticipated circumstances. Besides the dysenteries and diarrheas of bacillary origin, cases attributable to amebic infestation were widely discovered.

It has come as somewhat of a surprise to learn that a large number of our own soldiers returning from service were still harboring pathogenic protozoa in the intestine. Most of these persons were not visibly ill. They may have reported a history of diarrhea or of typical dysenteric attacks, often recurrent, but at the time of their medical examinations dysenteric symptoms have not been discernible. The numerous statistics gathered by the protozoologist Kofoid [1] and his colleagues through examination of both overseas and home service men show an incidence of *Endamoeba dysenteriae* of 20 per cent. in the former and 4 per cent. among the latter. On this basis it has been estimated that several hundred thousands of our approximately 3,000,000 overseas men may have become infested with this protozoon. That the earlier data are not exaggerated seems confirmed by the records subsequently reported by Kofoid [2] at the New Orleans meeting of the American Society of Tropical Medicine in 1920. Among more carefully examined ex-soldier students at the University of California an incidence of *Endamoeba*

1. Kofoid, C. A.; Kornhauser, S. I., and Plate, J. T.: Intestinal Parasites in Overseas and Home Service Troops of the U. S. Army, J. A. M. A. 72: 1721 (June 14) 1919.
2. Kofoid, C. A., and Swezy, Olive: On the Prevalence of Carriers of Endamoeba Dysenteriae Among Soldiers Returned from Overseas Service, Am. J. Trop. Med. 1: 41 (Jan.) 1921.

dysenteriae of 67 per cent. was found among the overseas men, in whom the infection was more than twice as common as in home service men.

It is evident from investigations abroad as well as in this country that, as Kofoid and Swezy point out, the war is returning into civil life great numbers of men who are carriers of the endameba of human amebiasis. As the California investigators [2] conclude, the number of carriers of amebiasis in the United States has been greatly increased by the infections in soldiers returning from overseas. A larger number of carriers than has hitherto been suspected exists in the normal population in this country. The dysentery syndrome is not an essential feature of the disease, and the infection is by no means limited to the tropics. The carrier phases are persistent and afford possible foci of contagion. The percentage of carriers relapsing or developing serious sequelae is as yet unknown.

Undue fears may be allayed by the information that the amebas do not multiply outside the body. The chief factor in the spread of amebic dysentery seems to be the encysted forms in the stools of convalescents or the now recognized healthy carriers rather than the motile amebas in the dysenteric stools. Modern methods of sanitation are tending to militate against epidemic amebiasis. Nevertheless, to quote careful students of the subject,[2] it is obvious that the prevalence of carriers of amebiasis in this country demands increased vigilance on the part of the federal, state and municipal health authorities.

NATURAL PROTECTIVE DEVICES FOR THE BRAIN

Whether or not autolysis or the self-digestion of tissues is a normal vital process or a continuation of intravital processes which have a marked physiologic function is still debatable. Ever since Ernst Salkowski, in 1890, recorded the occurrence of the postmortem "autodigestion" of tissues, interest has centered in the phenomenon. At first it was hailed as a ready explanation for a great variety of manifestations of the body alike in health and in disease. Presently, however, tissue autolysis was relegated by investigators to a position of lesser significance with the demonstration that in its most conspicuous forms it is a manifestation confined to postmortem conditions, in which the reaction and oxygen supply of the tissues are profoundly altered. Thus, it has been urged that autolysis cannot possibly be a direct continuation of a vital process because it does not appear immediately when death occurs, but only after a period of latency of several hours.[1] Furthermore, it has been objected that autolytic changes proceed best in an acid reaction, which is not the usual condition of the body fluids and tissues.

Despite these adverse comments, there are undeniably conditions in which autodigestive changes do proceed and have significance. They may come into play whenever tissue structures, cellularized exudates, tumors, fibrin clots and similar masses are dissolved and resorbed in the body. The same sort of change may go on in retrogressive processes, such as characterize the resolution of the uterus. It was evidently with such possibilities in mind that von Fürth [1] exclaimed a few years ago: "With feelings of grateful satisfaction akin to those of a traveler who after the discomfort of a boggy moor finds firmer foothold again beneath his feet, we approach the question of the significance of autolysis in pathology."

Bradley [2] of the University of Wisconsin has recently mentioned the unique behavior of the brain in respect to autolysis. This change proceeds, it is true, in brain tissue in the same way and is subject to the same conditions as in all other tissues thus far examined. Increased acidity leads to increased speed and extent of autolysis. The brain is, however, remarkably protected, according to Bradley, against the possibility of autolytic disintegration, after which repair would become practically impossible because structural regeneration is not a feature of the central nervous substance. An excellent circulation is likely to avert anoxemia, and thus an acid reaction. The total protein of the brain is only about one-half that of liver or other gland tissues, and the neurokeratin and other nonavailable structural proteins make up a considerable fraction of this. The amount of protein that can act as substratum in autolysis is therefore much less than in other glands. As Bradley further summarizes his conception of the mechanism for preventing conditions leading to brain autolysis: The large blood supply insures against asphyxial conditions and abnormal hydrogen-ion concentration. The respiratory center makes available every resource of the organism to combat an abnormal rise in the hydrogen-ion level in the brain. With a normal hydrogen-ion level maintained, autolysis cannot go on, and the protein framework is not altered.

More than half a century ago, Voit [3] showed that during starvation the brain and cord are less likely to lose in substance than are most other tissues. This is often referred to as an illustration of the advantageous sparing of vital organs during times of stress for energy. In consonance with this, Bradley reminds us that the outstanding feature of normal brain tissue is the permanence of its impressions, memory and habit. This permanence, he believes, is achieved by its remarkably perfect mechanism for preventing conditions leading to brain autolysis.

1. Von Fürth, O.: Chemistry of Metabolism, translated by A. J. Smith, Philadelphia, J. B. Lippincott Company, 1916, p. 80.

2. Bradley, H. C.: Brain Autolysis and Memory, J. Biol. Chem. 46: 37 (March) 1921.

3. Voit, C.: Ztschr. f. Biol. 2: 353, 1866.

Causes of Failure of Tuberculosis Campaign.—The failures in the tuberculosis campaign are not entirely due to defects from without; they may, at any rate, in part be ascribed to errors from within. And yet such defects are ignored, our diagnosis as to cause of failure is faulty, our resultant treatment for that failure is correspondingly incorrect.—H. Gauvain *Brit. J. Tuberc.* 15:2, 1921.

Current Comment

FILARIA LOA

The campaign against typhoid carriers has impressed the public, in part at least, with the seriousness of such cases; but little has been said concerning the significance of ambulatory cases of parasitic infections which threaten us with hitherto unknown maladies. Begle [1] recently described another case of infestation with the African eye worm (*Filaria loa*), of which, incidentally, more than twenty have already been recorded in North America. This case is particularly interesting because the infestation was acquired a dozen or fifteen years ago, and even today the patient carries an abundance of the microfilariae in the blood. From recent studies on life history it appears clear that the intermediate hosts are biting flies belonging to *Tabanidae*. These insects are distributed generously over this continent, and the very genera in which the eye parasites are known to develop breed abundantly in marshy places or regions well supplied with water from the tropics to the far north. The tabanids are persistent in their attacks on man, and rank among the most pestiferous of our biting flies. It is true, of course, that *Filaria loa* disease thus far seems to be confined to the west coast of tropical Africa; but yellow fever was once limited to a similar, if not the same, territory. Of course, the danger that the species may become established is undoubtedly less in a territory where clothing is general, houses are protected by screens, and the entire population constantly manifests fear of insect bites. But the long persistence of the larval stages in the blood increases greatly the liability that biting flies may be infested and the disease ultimately become endemic in some favorable environment. What has been said above applies with equal force to other species of *Filariidae* parasitic in man. Few truly endemic cases are on record, but, on the other hand, few blood examinations have been made in the parts of the United States where these parasites are most likely to occur.

1. Begle, H. L.: Infestation with Filaria Loa, J. A. M. A. **76**: 1301 (May 7) 1921.

SANDWICH CALORIES

Nowadays there is something convincing about calories. The word no longer is veiled in the mysterious uncertainty that formerly seemed to envelop it before the eyes of a student of medicine. The expression calories has become associated, even in the popular mind, with the idea of energy, a beneficent factor in human life. During the war, and long thereafter, the cry for calories came from many parts of the world and helped to give concrete character to the problems of food fuel. Thus, it has come about that the "substantial" foods and the important meals of the day furnish a reminder of high calory values. Such items of "extra food" as sweetmeats, the ice cream soda, the bite between meals and the omnipresent box of candy are commonly thought of as incidental and relatively insignificant additions to the daily food. This reputation is by no means justified, as appears in numerous studies, particularly those of Benedict. The most recent analyses [1] concern the composition of the American sandwich. Meat sandwiches, such as are commonly sold in this country in public places, average 75 gm. in weight and represent approximately 225 calories in fuel value. The familiar Frankfurt variety usually is even richer in energy-yielding food. Salad sandwiches, with their complement of fat-containing mayonnaise, are usually looked on as mere morsels of food, insignificant in the day's supply of sustenance. Yet some of the purchased specimens exhibited a value equivalent to 485 calories—almost a lunch in itself. Such items are far from negligible in nutrition; and, as Benedict remarks, the sandwich taken as extra food is by no means without significance, particularly in cases of obesity. Verily there is nothing elusive about calories, even between meals.

1. Benedict, Cornelia G., and Benedict, F. G.: The Energy Content of Extra Foods (Sandwiches), Third Paper, Boston M. & S. J. **184**: 436 (April 28) 1921.

HYPERSENSITIVENESS TO EPINEPHRIN

Functional tests that require little special training or unusual apparatus for their application and do not involve difficult technic in their performance are always adopted with enthusiasm by the medical profession. All too frequently they fail to maintain the reputation which an early enthusiasm seemed to warrant because of the insufficiency of the data provided. When diagnostic conclusions are to be based on small quantitative differences, it is highly important that the limitations of the measurements should be known. Above all, there must be an adequate control of the factor investigated in persons of undoubted health and vigor. The observation of the effects of injections of epinephrin, popularly known as the Goetsch test,[2] has been widely employed as a diagnostic procedure for the detection of hyperthyroidism. A "positive" reaction is alleged to be indicated by a rise of systolic blood pressure of at least 10 mm. of mercury or a rise in pulse rate of at least ten beats per minute, together with an increase of such signs as tremor, sweating, vascular pulsation, nervousness and palpitation. Not long ago the diagnostic value of the epinephrin reaction was thrown into question in THE JOURNAL,[3] because of the reported lack of strict parallelism which might be expected between the changes in blood pressure and pulse rate and the degree of hyperthyroidism. A group of investigators [4] at the Peter Bent Brigham Hospital in Boston have since then further questioned the supposed significance of the positive epinephrin test in the diagnosis of hyperthyroidism. Their thesis involves the question of specificity, for they have presented records of many persons hypersensitive to the drug who have no indications of hyperthyroidism. In such instances a "positive" reaction may be secured without any corroboratory indication from the more dependable, though far more difficult, measurement of the basal metabolism. It is, of course, true that both types of

2. Goetsch, E.: New York State M. J. **18**: 259 (July) 1918.
3. The Epinephrin Test in Relation to the Thyroid Gland, editorial, J. A. M. A. **76**: 866 (March 26) 1921.
4. Peabody, F. W.; Sturgis, C. C.; Tompkins, Edna M., and Wearn, J. T.: Epinephrin Hypersensitiveness and Its Relation to Hyperthyroidism, Am. J. M. Sc. **161**: 508 (April) 1921.

Gift to University of Cincinnati.—The directors of the University of Cincinnati have accepted the gift of Mrs. Bettie Fleischman Holmes, widow of Dr. Christian R. Holmes, of the equipment of the medical college cafeteria, valued at $5,000. Announcement was also made of a contribution of $500 to the department of preventive medicine from Julius Fleischman, former mayor of Cincinnati.

Personal.—Dr. Elmer I. McKesson, Toledo, was elected president of the National Anesthetic Research Society at a recent meeting held in Toledo.——Dr. Frank Warner, Columbus, has been selected to represent the Pennsylvania system in all the conventions and meetings of the medical and surgical section of the American Railway Association.——Dr. Charles T. Nesbitt, health director of Akron for the past three years, has resigned.——Dr. Carl W. Sawyer, Marion, was elected president of Rush Medical College Alumni Association at its annual banquet held, May 4, at Columbus.

Action of State Medical Association.—The house of delegates of the state medical association meeting at Columbus, May 2-5, approved by a vote of 58 to 10 Senate Bill 184, which repeals the law permitting nurses to administer anesthetics. The bill has been passed by the senate and is now pending in the house.——The committee on the president's address reported favorably to the house of delegates on retiring President Lukens' recommendation that the medical profession put aside its conservative policy and utilize the press to the fullest possible extent in teaching the people the things they ought to know about their life and health.——A resolution was adopted which pointed out that since alcohol is no longer a legitimate product it falls in the medical and pharmaceutical classification and should be tax free.

PENNSYLVANIA

Philadelphia

Babies' Hospital Open.—The dedicatory exercises of the Babies' Hospital were held May 9. Dr. Charles A. Fife is president of the institution. The building was erected at a cost of nearly $200,000. The main function of the organization is to prevent as well as cure all ailments of babies free of charge.

Personal.—Dr. Meyer Solis-Cohen has been appointed assistant professor of internal medicine in the Graduate School of Medicine of the University of Pennsylvania.——Lieutenant Colonel Henry Smith, noted surgeon and eye specialist of India, visited this city on May 18 and 19. Dr. Smith was the guest of the Ophthalmological Society.

The College of Physicians of Philadelphia.—A special meeting will be held, May 23. Madame Marie Curie, of Paris, will present to the college a Quartz Piezo Electrique Apparatus, designed and used by her in her earlier research work for measuring the radio-activity of radium. Dr. Robert Abbe, of New York, will present mementoes of Lord Lister and Louis Pasteur, with a custodianship case for their permanent preservation.

Medical Men Approve Merger.—At a dinner in honor of the Advisory Council of the Henry Phipps Institute, given by Dr. Josiah H. Penniman, acting provost of the University of Pennsylvania, at the Bellevue Stratford, May 10, a merger of the Phipps Institute with the new Graduate Medical School of the University of Pennsylvania was spoken of and approved by the research workers and specialists in the study of tuberculosis.

TEXAS

State Board of Health.—The governor has recently announced the following appointments for the state board of health: Drs. Murff F. Bledsoe, Port Arthur; Marcus P. Smartt, Manor; Dickson G. Thompson, Waxahachie; Thomas B. Fisher, Dallas; Marion M. Brown, Mexia, and Nettie Klein, Texarkana.

WASHINGTON

Health Board.—Governor Hart, on May 1, appointed Dr. Herbert C. Leiser, Vancouver, as the fourth member of the state board of health. Physicians previously appointed by the governor are: Dr. James H. Egan, Tacoma; Dr. William W. Brand, Prosser, and Dr. Robert N. Hamblen, Spokane. Dr. Paul A. Turner, Seattle, director of health, completes the board.

WISCONSIN

Substitute Amendment to Senate Bill.—There has been prepared a substitute amendment to Senate Bill 348 of the Medical Practice Act, regulating chiropractics and other new methods of healing which are now in vogue or which may in the future be devised. This substitute amendment has been approved by many of the best qualified members of our profession and is also approved by the osteopaths. It varies from the original bill in that it does not give the chiropractor a place on the board of medical examiners. It regulates chiropractics by providing registration for some of them and licensing for others, provided that they will measure up to the same standards with respect to preliminary and technical education now laid down in the Medical Practice Act for those who desire to enter the field of medicine.

CANADA

Hospital News.—By the will of the late Sir William Gage, Toronto, founder and president of the National Sanitarium Association, large donations are to go to the Toronto Free Hospital for Consumptives, the National Sanitarium Association and the other institutions in which Sir William was interested. Proper salaries to the extent of $10,000 annually are to be provided for the medical superintendents.

Irregular Practitioners in British Columbia.—The legislature of British Columbia has accorded optometrists recognition and a special bill will be framed to meet their requirements. In the case of other irregular practitioners these will be required to conform to the Medical Acts and pass examinations on the subjects and so indicate they have a knowledge of the human body in health and disease.

National Public Health Congress.—The Canadian Public Health Association, Canadian Association for Prevention of Tuberculosis, Ontario Health Officers' Association, and the Canadian National Council for Combating Venereal Diseases held a National Public Health Congress at Toronto, May 16-18. Visiting physicians who delivered addresses were Dr. Charles V. Chapin, Providence, R. I., who spoke on "Quarantine and Isolation in the Control of Communicable Diseases"; Dr. John B. Hawes, Boston, and Dr. Caleb W. Saleeby, London, England, who discussed "Eugenics and Public Health."

Personal.—Among American physicians who will take part in the program of the annual meeting of the Ontario Medical Association, Niagara Falls, Ont., May 31 to June 3, are: Dr. William Charles White, Pittsburgh; Dr. Harvey R. Gaylord, Buffalo; address in medicine, Dr. Frank Billings, Chicago; Dr. Lewis Park, Buffalo; Dr. Charles Graef, New York; Dr. Duncan McPherson, New York; Dr. James S. Pritchard, Battle Creek, Mich.; Dr. John R. Williams, Rochester, N. Y.; Dr. Arthur A. Small, Chicago; Dr. Campbell P. Howard, University of Iowa; Dr. Leonard G. Rowntree, Mayo Clinic; Dr. Irving W. Potter, Buffalo; Dr. Ernest K. Cullen, Detroit, Mich.; Dr. Lothrop, Buffalo; Dr. H. Ryerson Decker, Pittsburgh; Dr. Bertram Sippy, Chicago; Dr. William H. Porter, New York; Dr. Charles W. Webb, Clifton Springs, N. Y.; Dr. Martin E. Rehfuss, Philadelphia; Dr. John B. Deaver, Philadelphia; Dr. John Beemer, New York; Dr. Charles G. Sutherland, Mayo Clinic.

GENERAL

Hookworm Study.—Dr. William Walter Cort and E. L. Augustine, Baltimore, and Dr. J. E. Achert, Kansas State Agricultural School, sailed May 5, for the Island of Trinidad to spend three months studying the hookworm. They are sent by the International Health Board of the Rockefeller Foundation and will take with them a complete set of laboratory apparatus and supplies.

Hearings on New Volstead Bill.—Hearings on the bill introduced by Representative Volstead of Minnesota prohibiting the sale of beer for medicinal purposes are being held before the Committee of the Judiciary of the House. No officials of medical societies have appeared as witnesses to testify to the necessity of beer as a medicine. One physician from New York gave testimony against the measure. The witnesses in the main were representatives of the Anti-Saloon League and the Women's Christian Temperance Union, who insisted that beer should be prohibited as a medicine and that its sale should be stopped on physicians' prescriptions.

Bill for Veterans' Bureaus.—Representative Sweet of Iowa has introduced a bill in Congress providing for the establishment of a Veterans' Bureau in the Treasury Department, which contemplates a transfer of the problem of caring for disabled ex-service men from the Bureau of War Risk Insurance and the U. S. Public Health Service to this new organization. The Veterans' Bureau, according to the proposed measure, will have complete charge of the examination, hospitalization, treatment, medical care, nursing and vocational education of war veterans. Use of the hospitals of the United

States Public Health Service, the War Department, the Navy Department, the Interior Department, the National Homes for Disabled Volunteer Soldiers and all other governmental facilities are made available for the use of the Veterans' Bureau. The bill has been referred to the Committee on Interstate and Foreign Commerce.

Use of Alcohol in Industrial Hospitals.—The Philadelphia Association of Industrial Medicine reports that conflicting replies having been received by their members from letters sent to district prohibition directors regarding the securing of grain alcohol, a letter was sent to the director of prohibition, Hon. J. E. Kramer, at Washington, D. C., who replied as follows:

"Receipt is acknowledged of your letter of February 3, 1921, relative to the purchase and use of alcohol in industrial first aid stations directly supervised by regularly qualified and registered physicians.

"In reply thereto you are advised that if a physician is employed by an industrial concern in its emergency hospital, such physicians may procure liquor for emergency as well as for compounding purposes, as provided in Sections 71 and 71 (a) of Regulations 60."

LATIN AMERICA

New Officers of the Medical School of Medellín.—Dr. J. B. Montoya y Flórez has been appointed to replace Dr. B. Mejía as director of the medical school of Antioquia University, Medellín, Colombia. Dr. P. Nel Cardona is the new secretary. The school offers thirty-one courses and has twenty-eight professors.

New Brazilian Journal.—The first number of the *Revista de Medicina e Hygiene Militar* of Brazil has already appeared. It is edited by General Dr. Ferriera do Amaral, Almirante Dr. C. Bulcão e Professores M. Couto, A. Peixoto e J. Moreira. The new journal is a continuation of the former *Revista Medico-Cirurgica Militar.*

Gallinal Prizes.—The officers of the School of Medicine of Montevideo have approved the rules which will govern the granting of the Alejandro Gallinal prizes. The funds offered by Dr. Gallinal for this purpose, amount to 30,000 pesos which will be distributed annually in assignments from 3,000 to 5,000 pesos. Only Uruguayans are eligible to the prizes.

Personal.—Three French army physicians, Drs. L. Marland and Boisseau and P. Marcel, have signed contracts with the medical department of the Brazilian army and been presented to the minister of war at Rio.——Dr. Piraja da Silva has been placed in charge of the antisnake venom branch at Bahia of the Butantan Institute.——The *Brazil-Medico* states that Dr. Klotz of the chair of pathologic anatomy at the University of Pittsburg has accepted a call to the similar chair at S. Paulo.

FOREIGN

Infroit Prize.—The Academy of Medicine at Paris has received a donation from the widow of Marquis Visconti to found a triennial prize of 3,000 francs in memory of the late radiologist, Infroit.

Memorial to Strambio.—A plate has recently been placed by the city of Milan and others on the house formerly occupied by Dr. Gaetano Strambio with a tribute to his work as physician, writer and pellagrologist.

Memorial to Bozzolo.—A bust of Professor and Senator C. Bozzolo was recently unveiled in the hall of the University of Turin where he had been the incumbent of the chair of clinical medicine for thirty-seven years until his death occurred in 1920.

Fibiger in Paris.—Professor Fibiger of Copenhagen delivered a public lecture at Paris recently on the invitation of the French Cancer Research Association. He described the experimental production of cancer in rats and mice, and his own personal work in this line with experimental gastric cancer.

Tribute to Brocq.—Students and friends of Professor Brocq are collecting funds to present him with a portrait bust on the occasion of his approaching retirement from the Saint-Louis Hospital. The treasurer of the fund is Dr. Clement Simon, 8, rue Anatole-de-la-Forge, Paris. Each subscriber will receive an engraved portrait of Dr. Brocq.

Tribute to Boeckel.—On the occasion of the Congrès de Chirurgie which is to convene at Strasbourg, October 3, with Prof. E. Boeckel in the chair, the organizing committee wishes to present him with a medal as a token of esteem for his efforts during the German occupation. Subscriptions can be sent to M. Mouly, agent of the Association française de chirurgie, 12, rue de Seine, Paris.

Prizes for Marie.—The Bréant prize offered by the Académie des Sciences has been conferred on Drs. A. Marie and Levaditi for their work on the neurotropism of syphilis. At the same time the Académie des Sciences Morales et Politiques has awarded the académie prize to Drs. A. Marie and Legrain for their recent work on the psychologic causes of alcoholism. Still another prize has been conferred on Marie recently, the Pannetier prize given by the Académie de Médecine. It was conferred on Drs. A. Marie and Levaditi for an article on the causes of general paresis.

Psychiatry Week at Paris.—The last week in May witnesses the convening at Paris of most of the societies that have to do with the care of the insane, prophylaxis of insanity, the material interests of alienists, gatherings of asylum interns, etc. It is proposed to combine the whole into a *semaine psychiatrique*, with consultations with the state authorities on certain questions of administration. The psychiatric congress to be held next year is to be a special meeting in honor of the tercentennial of François Bayle, the *grand ancêtre de la psychiatrie française*, as he is called, born in 1622.

Clinics in Vienna.—The dean of the Medical Faculty in Vienna has issued a statement relative to postgraduate work. It is announced that 1,300 beds of the Allegemeines Krankenhaus are available for postgraduate teaching, that the number of necropsies is about 3,000 annually and that living expenses will average $50 to $60 per month. A special announcement has been issued of courses to be given during June and arrangements beyond that date may be made by addressing the editor of the *Wiener medizinische Wochenschrift*, Wien, IX, Porzellangasse 22. Another series of lectures is to be given in September and a final series in December.

International Red Cross Conference.—Resolutions were unanimously adopted by the International Red Cross Conference, held at Geneva in April, inviting the national governments to make additions to the Hague convention absolutely forbidding the use of poison gas, whether as drift gases or in projectiles, and limiting war in the air to strictly military objects, so that the civil population may be as far as possible protected from this new weapon, and useless destruction avoided. A resolution was also adopted asking the governments to take steps to add to the International Convention rules governing the protection of aeroplane ambulances and airships used for the carriage of sick or wounded. A suggestion from the Swedish and Danish Red Cross societies that the rules should permit supplies to pass through a blockade to sick persons, old people and children was adopted although the difficulties of its enforcement were recognized.

Monument to Spanish Physician.—On April there was inaugurated in one of the parks of Madrid, opposite the zoological garden, a monument to the prominent Spanish physician and politician, Dr. C. M. Cortezo, the present editor of the *Siglo Médico*. At the inauguration ceremonies, several speeches were made, praising Dr. Cortezo's long and fruitful activities on behalf of the medical profession and humanity in general. Prominent among those present were fifty boys and fifty girls from the Physicians' Orphans Home, which owes so much to Cortezo. The monument is simple, has a tablet with Cortezo's picture, the staff and the snake as a medical emblem, and a child feeding birds, the latter being allegorical of Cortezo's work on behalf of physicians' orphans. Cortezo, who was present, in expressing his thanks for this tribute, said gracefully that he accepted it only as homage to the medical profession, as otherwise it would have been out of the question for him to accept a monument while living, in view of the fact that none had already been erected for either Cajal or Méndez Alvarez.

Deaths in Other Countries

Dr. **Gino Galeotti,** professor of general pathology at the University of Naples and one of the pioneers in the study of bubonic plague in India.——Dr. **R. Becerro de Bengoa,** professor of gynecology at the University of Madrid, aged 38.——Dr. **F. K. Hallager,** a leading Danish psychiatrist and neurologist, aged 72.——Dr. **A. Hugelshofer** of Basel succumbed to effects of infection at necropsy, aged 45.——Dr. **P. Klemm,** a well known surgeon in German Baltic region and writer on surgical subjects, aged 59.——Dr. **T. Wechsler,** professor of latin literature in the University of Buenos Aires, at one time on the editorial staff of the *Semana Médica*.——Dr. **G. Berti,** professor of pediatrics at the University of Bologna.——Dr. **K. Kjellberg,** professor of anatomy at Stockholm and member of the lower house, aged 54.——Dr. **F. Portela,** at one time chief of the municipal health service

at Havana.——Dr. **M. Delfin,** a well known pediatrist of Havana and at one time director of the Departamento de Beneficencia, and president of the board of education.——Dr. **H. Duret,** a surgeon of Lille, honorary dean of the Université libre and president of the society to aid the wounded in war, aged 71.——Dr. **A. Margulies,** professor of psychiatry at the German University at Prague, aged 51.——Dr. **Jorge Tobón C.** of Medellin, Colombia, professor in the medical school and chief of the departmental service for care of the insane. The cable brings word of his death at Paris.——Dr. **E. Rode,** a well known gynecologist of Christiania, Norway, and writer on obstetrics and gynecology, aged 68.——Dr. **Milecky,** killed at Kattowitz, Poland, while dressing the wounded.——Dr. **L. J. Uricoechea,** professor in the medical school of Bogotá and president of the National Academy of Medicine, died recently at Baltimore.——The death is also reported from Colombia of Dr. **Rodrigues** at a very advanced age. He was long professor of surgery in the Bogotá school.

Government Services

Hearings on Public Welfare Bill

The proposed Department of Public Welfare, recommended by President Harding, has been the subject of hearings before the joint meeting of the Senate and House Committees on Education and Labor. Opposition has developed to certain features of the measure, particularly by proponents of the plan to establish a separate department of education. A division of education is contemplated in the Department of Public Welfare, but these advocates of the Department of Education declare that the education of the American people is important enough for a separate department instead of a mere division in the Department of Public Welfare. Up to this time the hearing has not yet taken up any questions nor heard any witnesses with regard to the public health features of the measure. Dr. A. L. Forster of Chicago appeared for the chiropractors and urged that the bill be amended so as to prevent any discrimination against any school of healing.

Reorganization of Government Bureaus

The Smoot-Reavis Joint Congressional Committee, created for the purpose of reorganizing the various departments and bureaus of the federal government, was formally organized on May 13. Walter F. Brown, Toledo, was appointed as the President's personal representative and was elected permanent chairman. Senator Reed Smoot was elected vice chairman. President Harding sat with the committee and outlined his views regarding the problem in hand. The first step will be to make complete surveys of the personnel of the departments and bureaus and the individual work of employees. When these surveys are completed investigation will follow together with hearings.

Vacancies in Naval Medical Corps

The Medical Corps of the Navy is confronted by a discouraging situation. Approximately 600 vacancies have occurred, and to fill these vacancies during the past year only six medical officers have been appointed from civil life and only 100 from the reserve and temporary medical officers. This situation is due largely to the fact that private practice is more remunerative. Officers in the Medical Corps of the Navy who believe that the right kind of material can be secured for the Navy are hopeful that the department will take some steps to attract medical men, so as to influence in a favorable way the existing failure of medical men to enter the Navy.

Hospital Facilities for Tuberculous Veterans

The War Department has ordered that 600 beds at the Fitzsimmons General Hospital, Denver, be prepared for use for the care of tuberculous war veterans. In order to furnish these accommodations it will be necessary to provide additional buildings and facilities. Work on the improvement will be started within the next month. Bids have already been advertised for, the plan being to provide six 100-bed wards and a number of auxiliary buildings.

Foreign Letters

LONDON

(From Our Regular Correspondent)

April 19, 1921.

The Lancet

A change in the proprietorship of the *Lancet* is announced. It "has come under the control of Henry Frowde and Hodder and Stoughton (Oxford medical publications); there will be no change in the editor or the policy of the paper." Thus the leading English medical weekly, which is now approaching its centenary, for the first time has passed into the hands of publishers. The journal was founded in 1822 by Thomas Wakley, a medical man of extreme radical views in politics who aroused considerable animosity among the leaders of the profession because he reported their hospital lectures—a thing which, curiously, in those days was thought objectionable. For the greater part of its career the *Lancet* was owned and edited by members of the Wakley family who were all qualified medical men, and of whom one, Mr. Thomas H. Wakley, practiced as a surgeon. The last member of the family who edited the journal was Mr. Thomas Wakley. On his death in 1909 the *Lancet* was purchased by a company which mainly consisted of medical men connected with it.

Deaths of Workers at the Radium Institute

Recently I reported the deaths of three workers at the Radium Institute which were attributed to aplastic anemia due to their occupation. The matter was first published here through a circuitous channel, being derived from a French report. An official report has now been made by the medical superintendent of the Institute, Mr. Hayward Pinch, which considerably modifies the previous one. The first death occurred in December, 1916, in a worker who was seen by several eminent specialists and whose death was ascribed by them to pernicious anemia. The second death occurred in January, 1920, in a nurse, and was due to infective endocarditis; but it is admitted that the radium had unquestionably affected her, though it was not from this alone that she died. The third death occurred in February, 1921, in a man, aged 47, and was due to acute pneumonia. Each case is claimed to have been due to a definite disease apart from the effects of radium, but the institute committee considered it highly probable that the work of these persons weakened the powers of resistance to the diseases from which they suffered. Dr. J. C. Mottram was appointed to make a special investigation of the effects of radium on the staff of the institute. For a year he made examinations of the blood of every worker, from the superintendent down to the hall porters. He found definite changes in the red and white corpuscles due to exposure to radium. He showed that radium workers are subject to widely different amounts of irradiation varying as they work near to or distant from radium and according to the period of exposure. Laboratory workers who prepare and measure applicators containing emanation and radium, and clinical workers who attach screens to the radium applicators and subsequently apply them to patients are especially exposed. Other workers, down to the servants of the institution, are subject to only small quantities of the gamma radiation, which pervades the whole building. The polymorphonuclear, leukocytic, and lymphocytic blood count of radium workers was found decidedly lower than that of normal persons. Even among the less irradiated workers there was no evidence of leukocytosis. This contrasts with the fact that in small animals alternate periods of irradiation and freedom from irradiation will under certain conditions produce profound leukocytosis,

and that the leukopenia following a single dose of roentgen rays is often followed by leukocytosis. The leukopenia of radium workers is manifest after a few weeks' exposure. No association was found between the leukopenia and any ill health. An extremely thorough protective system has been elaborated and has been copied by other institutes. Dr. Mottram has recently reported, after a year's blood examinations of the workers, that their blood condition is slowly returning to normal.

Medical Inspection of Adults

Dr. Christopher Rolleston, health officer for Rutlandshire, makes a plea for routine periodic examination of all adults. An investigation of the ages at which 250 deaths in his county occurred shows that twenty-two occurred under 1 year; four between 2 and 5 years; seven between 5 and 15 years, and twelve between 15 and 25. Thus, from birth to the age of 25 only forty-five persons succumbed. From this period onward the death roll rapidly increased. Between 25 and 45 there were twenty-six deaths; between 45 and 65, 50; and from 65 onward, 129. These figures he regards as showing the futility of the English system, which includes a thorough medical examination for persons at the healthiest period of life, between the ages of 5 and 15 years. Thereafter all routine medical examination and treatment are confined to those insured under an act admitted to be inadequate to the needs of the population and the demands of medical science. Dr. Rolleston urges that routine medical examination of all persons once or twice a year should be a legal enactment. The signs of early disease in the middle-aged could be detected and remedied. Early arterial disease in men could be prevented from proceeding to the lengths at which it is now commonly discovered. Serious uterine disease in women could be detected and remedied.

Digestion of the Esophagus

At the Medico-Chirurgical Society of Glasgow an important communication on this subject was made by Prof. J. H. Teacher, J. H. Pringle and L. T. Stewart. Mr. Pringle had observed some years ago a case of vomiting of brown material with pain behind the sternum after operation and thirty-six hours before death. No cause could be made out except digestion of the esophagus (which had not gone to the length of perforation). In 1919 the authors described in the *British Journal of Surgery* a number of cases in which digestion of the esophagus appeared to have been the cause of hematemesis and sometimes of death. Intra vitam digestion of the esophagus appeared to arise in the following manner: Vomiting of gastric juice occurred, but the esophagus failed to clear itself, and some of the fluid remained, accumulating particularly above the cardiac sphincter, where injury of the tube was usually most advanced. In postoperative hematemesis, the fluid ejected usually was extremely acid, and patients sufficiently conscious frequently complained of the scalding sensation in the throat and lips. The lesions produced before death by the gastric juice were likely to be more or less obliterated by continuation of the digestion after death. But microscopic examination detected unmistakable signs of vital reaction in the form of inflammatory changes—acute ulceration. It was clear that digestion of the esophagus during life did occur, that it might be the cause of death, that it occurred in other than operative cases, and that it might be arrested and healing take place. Its occurrence was shown by hematemesis and in some cases by pain behind the sternum. In most of the cases digestion probably occurred not more than thirty-six hours before death. The lesions showed great variation—from superficial erosion with hemorrhages into the affected tissue, to perforation or extreme maceration of the lower third of the esophagus and digestion of the adjacent surface of the lungs. An important diagnostic feature, available at necropsy, was the relatively slight or absent post-mortem digestion of the stomach, contrasting with advanced digestion of the esophagus above the cardiac ring. Signs of reaction might be unrecognizable or slight in the lower parts, but well marked in sections prepared from the upper part of the damaged esophagus.

PARIS

(From Our Regular Correspondent)

April 22, 1921.

Use of Drugs in the Antituberculosis Dispensaries

Although, up to the present time, no drug has been discovered that will cure pulmonary tuberculosis, nevertheless most of the antituberculosis dispensaries use (and misuse) certain drugs, which are almost always useless and for the most part harmful. The item of drugs is a heavy one in their budget. When any criticism is offered on this state of affairs, the reply is made that if we expect to attract tuberculous subjects to the dispensary and retain their interest we must provide medicinal treatment for them. Now, however, Dr. E. Rist, physician to the Laënnec Hospital and to the Léon Bourgeois dispensary, has come forward to show how unreasoned and inconsistent such statements are. During the year 1920 he gave 1,154 consultations to 601 patients at the Léon Bourgeois Dispensary. During this period only 141 medicinal prescriptions were given, and these to only ninety-two patients. Or, to express it otherwise, of every hundred consultations, twelve resulted in a prescription; and of 100 consulting patients, only fifteen received a drug, which is a small percentage. The question may be asked, Why do the patients return if the dispensary gives so few prescriptions? Simply because they find that they receive efficient social assistance. Most of them are sufficiently intelligent to understand that they are given a thorough examination; that the dispensary takes an interest in them, and that what is procured for them —a bed in a hospital or a sanatorium, gratuitous meals, employment, a sojourn in the country—is worth more than pills, syrups or even hypodermic and intravenous injections. Many of them are also perfectly capable of appreciating the great value of the service that a dispensary properly equipped and directed furnishes them in the way of a precise and correct diagnosis.

Need of Better Protection of Persons in the Vicinity Against the Damaging Effect of Scattering Roentgen Rays

In providing for the protection of operators against the possible damaging effects of scattering roentgen rays, thus far consideration has been given exclusively to lateral protection by surrounding the roentgen-ray apparatus with double lead screens from 5 to 6 mm. thick. But against the vertical radiations no protection has been provided. The fact remains that persons who occupy the floors above and below the apparatus are exposed to intense applications of roentgen rays. Deep roentgen-ray therapy requires for the treatment of cancer a high intensity of the rays, in France a spark gap of 25 cm. and one sitting of from twelve to fifteen hours, and in Germany a spark gap of 12 cm. and one sitting of five hours being employed. The irradiation produced by such intensity possesses an immense power of penetration. Monsieur Contremoulins, who lately called the attention of the Academy of Science to these facts, thinks that such high-powered apparatus cannot be installed in densely populated urban centers without exposing the inhabitants to grave dangers. Special measures of protection must therefore be provided.

The Franco-Anglo-American League Against Cancer

The general annual assembly of the Franco-Anglo-American League Against Cancer met, April 19, at the Medical

School of the University of Paris, under the chairmanship of Monsieur Leredu (minister of hygiene, public charity and social provision), who was assisted by Prof. Mark Baldwin, Professor Hartmann and Professor Roger, dean of the Paris Medical School. It was found that the finances of the league, although in a prosperous condition, would not be adequate for the multiplicity of tasks that the league has set for itself. Numerous gifts have been made to the league of late, but it was decided that a further energetic appeal must be addressed to the public, which has a paramount interest in the success of the undertaking. Professor Hartmann reminded the assembly that cancer is constantly increasing, and stated that it caused every year the death of more than 32,000 in France.

Election of Vice President of the Academy of Medicine

The Academy of Medicine recently took up the election of a vice president for the current year (president for 1922) to fill the vacancy caused by the death of Professor Bourquelot. By seventy-three votes out of seventy-five, Monsieur Béhal, professor in the Paris School of Pharmacy, was chosen. Professor Béhal has been a member of the Academy of Medicine since 1907, and was lately elected a member of the Academy of Science. During the war he was the director of the bureau of chemical and pharmaceutic products, which rendered such excellent service for national defense in keeping up the supply of drugs and in attending to matters of prime importance to the civil population.

Exposition on Child Welfare and Maternity Work

A national exposition on child welfare and maternity work will be held in the Jardin Zoologique d'Acclimatation in Paris, from June 15 to July 25, 1921. Two congresses will convene during the exposition. The first will bring together the members of the fifty-one French leagues on repopulation and amelioration of the birth rate. The second will be attended by the departmental commissions on childbirth, which have been summoned to meet at Paris at the invitation of the superior council. An extensively planned baby show, a gratuitous distribution of toys and baby garments, and the formal bestowal of medals by the Famille française will be the closing features of the exposition.

Death of Prof. Henry Duret

Dr. Henry Duret, formerly surgeon to the hospitals of Paris and honorary dean of the Medical School of the University of Lille, died recently at Lille at the age of 71.

BUENOS AIRES

(From Our Regular Correspondent)

March 14, 1921.

Prevention of Tuberculosis

After a long discussion, the House of Representatives has approved with some changes the bill introduced by the government for an antituberculosis campaign. The necessary funds will be obtained by increasing the tax on the lottery tickets 5 per cent., and decreasing the amount of the prizes 10 per cent. It was considered advisable to obtain these funds from this legalized gambling, which the government exploits under the name of lottery, as otherwise no money would have been forthcoming, as has happened heretofore. There have also been some criticisms of the high percentage (about 40 per cent.) derived by the government from the lottery, although the proceeds are devoted to public charities. Fifty per cent. will be assigned to the construction of modern hospitals and to create new services or extend existing ones. Thirty per cent. will be distributed among federal and provincial public health authorities and charitable organizations to help in the prevention and treatment of tuberculosis, but the amount received by the agencies will not exceed 50 per cent. of the amount spent by themselves. The other 20 per cent. will be assigned to institutions for the prevention of the disease or the support of patients. The national department of public health will have charge of the funds, except the 30 per cent. for subsidies, which will be distributed by the department of foreign affairs. This part of the bill created much opposition, as many representatives were in favor of a special commission to have charge of the appropriation and not any government department. It is estimated that this fund will amount annually to more than 2,000,000 pesos (about $640,000), and perhaps it will even be twice as much.

Plague at Córdoba

As on several previous occasions, there have been some new cases of plague in several places in the province of Córdoba, but they were isolated immediately. The provincial government has pushed vigorously its prophylactic campaign against the disease.

Foreign Professors

Dr. Kottmann, professor of pathologic physiology at Berne, Switzerland, will arrive in a few days.——Dr. R. Ribeyro, professor of parasitology at Lima, has stopped here on his way to Brazil.——Professors Labbé and Brumpt, of the Medical School of Paris, will arrive in August to give lectures. ——Next April will begin the annual interchange of professors between the medical schools of Montevideo and Buenos Aires.

BUDAPEST

(From Our Regular Correspondent)

April 4, 1921.

Prevailing Diseases in Albania, Montenegro and Herzegovina

The Board of Sanitation of the Serbian State has just published its annual report from the year 1919, which was marked by a serious epidemic of smallpox in the Foca and Slatina district (Herzegovina); about 130 deaths occurred in the four months from May to September, and the total of deaths for the year from this cause alone amounted to 350. The majority of victims were agricultural laborers and also better class persons who had neglected vaccination, though every convenience for it was offered by the authorities. Smallpox, it may be stated, is more or less endemic at Beran Foca, Pis-Kopja (Albania) and this year there was an outbreak in Scutari. Though the heat of Valona is often excessive, the climate is salubrious, and to all appearances the yellow fever of former years has been virtually stamped out. This success is due to the exertions of a department organized by Dr. Ivan Petrovici, which for some time has been engaged in scientific sanitary work, including the systematic destruction of mosquitoes of the yellow-fever transmitting variety. The malaria transmitter must continue to be plentiful in the marshy outlying districts for many years to come. Similar measures have been taken in Mostar with beneficial results, the health of both cities having entirely changed during the last few years, and sanitary conditions no longer inspiring the dread which they formerly did. In the case of Mostar it was largely owing to the draining and reclaiming of pestilential land in connection with erecting farm buildings on an extensive line that the health of the town was so greatly improved. Malaria is common along the low lying coast belt. It is also rife wherever there is marsh and along the big, slowly moving rivers. Mosquitoes abound in these parts in myriads, and the mortality is sufficient to produce alarm in the traveler, though it is to be doubted whether the malaria of Albania is of so virulent a type as is found in Africa and Brazil. Much of the mortality is due to bad food in sickness and to improper care. Of other diseases, tuberculosis is the most persistent in its ravages in the cities, being especially prominent in Elbasan, Mostar and Niguesan, where it shows a predilection for the native population. Though much is due

to damp and predisposition, the majority of cases are the result of bad housing, bad food, want of aid and care indoors, and dirty habits inseparable from the conditions of life prevailing among natives and the lower classes generally. Leprosy and goiter are still to be found in Albania, the former sporadic and the latter confined to certain native tribes, owing possibly to the water and the absence of lime which is a feature in the geological formation of the greater part of the coast.

Accidental Infection of a Medical Man with Syphilis; Is it an Accident from the Insurance Point of View?

A country practitioner in the southeastern portion of Hungary has, according to his own statement, been accidentally infected with syphilis through giving a calomel injection to a syphilitic patient. When afterward wiping the needle with a piece of wadding he pricked one of his fingers, but the wound seemed to be so unimportant, being in fact hardly visible, that he did not apply dressing but only washed the finger with a solution of mercuric chlorid. The accident took place in the presence of the patient. Four weeks later the medical man found he was suffering from a skin eruption due to secondary syphilis, and a few days afterward his throat also began to show syphilitic manifestations. He then applied to the accident insurance company in which he was insured, claiming payment for partial disablement on the ground that the knowledge that he had become infected with syphilis interfered with his practice to such an extent that he was not able to earn half so much as formerly. The accident company refused his claim, saying that it was prepared to allow him full pay for as many days as he should be confined to bed, but more than this it would not do. The medical man has accordingly taken the case into court, which is expected to be guided by the opinion of a member of the Forensic Medical Council.

Quack Medicines and the Press

When an attempt was made to place on the statute books of Hungary a bill to regulate the sale of quack medicines, most of the large daily and weekly papers protested against the passage of such a bill on the ground that vested interests were attacked, and pointed to the duty of safeguarding the skill and labor that had been expended on the preparation of these quack medicines. In fact, the attitude of newspapers generally in Hungary is antagonistic to the passage of laws calculated to injure the sale of proprietary medicines or of secret remedies, the proprietors of which are among their most lavish advertisers (mostly foreign ones). The advertising of secret remedies is carried on more freely in the Hungarian journals even than in those of the neighboring countries, for in the most influential of them it is a daily experience to see an advertisement setting forth in flowery pseudoscientific, that is to say, entirely unscientific language, the manifold advantages to be derived from the use of (say) a tuberculosis remedy, wedged in between literary articles on really important subjects.

BERLIN

(From Our Regular Correspondent)

April 15, 1921.

Hereditary Transmission and Natural Selection

In a recent lecture on hereditary transmission and natural selection, delivered before the Eugenics Society of Berlin by Prof. Erwin Baur, director of the Biologic Institute in Potsdam, it was brought out that the peoples of the earth today are made up of many different races. No people is purely of one race. The Germans, besides the Germanic, are composed of many other widely different racial elements. We, as a people, today possess entirely different physical and mental characteristics from the Germans of the early middle ages, for example. It should be considered that, in the crossing of two individuals who present racial differences with respect to only four points, sixteen different combinations or types may be produced in the offspring; in the crossing of two individuals with ten different racial characteristics, 1,024 different types are possible, and with twenty different racial distinctions more than a million different types may result, theoretically. Investigation of the laws of heredity has shown that resulting types of hybrid offspring present a certain definite numerical ratio to one another (Mendel's law). If in a type being produced by cross-breeding a certain definite element is being continually eliminated (for example, when light-colored rabbits are more frequently destroyed by birds of prey than are the dark-colored ones), a change in the otherwise constant numerical relationships of the cross-breed will result to the disadvantage of the element being thus eliminated. Now, while there is a process of natural selection, the rôle of which for the preservation of the species by the elimination of unfit individuals is well known, there is also another kind of selection (counter-selection), by which not the preservation of the species but, on the contrary, its degeneration is brought about. It is extremely probable that herein lies the reason for the rapid downfall of the civilized peoples of ancient times. A second factor that leads to changes in the composition of a mixed race is the operation of mutation. Out of a thousand individuals there may be two or three who suddenly present a disruptive irregularity in the shape of a marked tendency to degeneration. Hereditary malformations and hereditary diseases thus arise without any assignable cause; for example, albinism, deafness, brachydactylia, certain types of myopia, and various skin diseases. The study of these phenomena was rendered difficult until it was recognized that a given phenomenon may be caused by distinctly different hereditary factors. Furthermore, it must be borne in mind that the mendelian law of heredity does not always work out exactly in accordance with a simple formula. There are hereditary characteristics (not the diseases but the disposition to the disease or the malformation, etc., are inherited) which can be demonstrated in every individual who inherits them; that is to say, they are dominant, and then there are other characters that are recessive, that is, they do not appear ordinarily unless the disposition thereto was inherited from both progenitors. The recessive hereditary characters, therefore, present themselves in a much smaller percentage in the offspring but become more pronounced in consanguineous marriages, since here there is a much greater likelihood of like characteristics being found in both parents. Every person probably has within him several such concealed dispositions of a pathologic nature, which date back to the operation of a single so-called mutation. Herein lies (as in the counter-selection) a great danger for the species concerned, whether it be plant, animal or man. Nature helps itself along in radical fashion by means of natural selection. Among species of wild animals the appearance of a mutation does no harm, for the constitution of the individuals concerned is much weaker and incompatible with survival. But the more highly civilized man becomes—the farther removed he is from the animal—the less important is the part played by natural selection. We need to consider only how many people owe their existence to the advanced stage of civilization in which they live. Hygiene, the art of cooking, obstetrics and infant welfare have all contributed much to make them what they are. Great epidemics and famines such as formerly sifted out the chaff from the peoples of the earth are no longer known, and the courts of justice nowadays preserve the lives of many whom, in olden times, the noose would have claimed as its victims. Then, again, we have today the large number of mental inferiors, whose lives are not only preserved, but who are also allowed every oppor-

tunity to propagate. Thus, in the course of time, the relative proportion of healthy individuals to the defective has continually decreased, for the reason that natural selection is more and more thwarted. To show how heavy a load the healthy class takes on itself in this connection, Correns refers to the well known case of the American degenerate woman who in three generations had 834 descendants, the history of 709 of which could be ascertained, with these findings: 196 born outside of wedlock, 142 committed to the poorhouse, 62 with mental disease, 174 prostitutes and 74 arch criminals, among whom were 12 murderers. Within a space of seventy-five years this family cost the state several million dollars for institutional care and court trials. Similar observations have also been made in Europe, to mention only the inquiries of the Swedish investigator Lundborg. The suspension of natural selection, combined with the operation of counter-selection, thus signifies degeneration for any people. The reason for a lowered birth rate among strong and vigorous types are manifold, but late marriages play a very important part. It is evident that strata of the population that always begin to propagate at the age of 20 will, in the course of a hundred years, possess a great numerical advantage over others in which marriage is deferred until the age of 30 is reached, as the generations, being shorter, follow one another in quicker succession. Another factor is that the longer marriage is postponed, the higher is the percentage of venereal diseases, which, in turn, militate against a normal birth rate. It is easy enough to say in theory what should be done in order to ward off the danger of decadence, but from the practical standpoint endless difficulties present themselves. We must with conscious effort support eugenic selection as a substitute for natural selection, which has been lost. We must endeavor to prevent propagation among hereditary inferiors.

Free Choice of Physicians in Connection with Health Insurance

Last month, here in Berlin, by an agreement between representatives of the medical profession and the health insurance societies (krankenkassen), free choice of physicians was introduced, so that every physician who accepts the conditions thus agreed on may be allowed to treat those who are insured in the krankenkassen. The import of this compact may be seen from the fact that at present there are 230 krankenkassen in Berlin with a total membership of 1,400,000. For every member insured the krankenkassen pay an annual medical fee of 30 marks (less than 50 cents at the present low mark value), which amounts to a total of 42,000,000 marks. A similar agreement has been entered into in regard to the so-called free auxiliary societies (hilfskassen) and the societies whose membership is confined to public officials (railway, postal and police services), which number about 100,000 members. The conditions of the agreement provide for the settlement by arbitration of matters of dispute between the krankenkassen and the medical profession. There are also certain special provisions intended for the protection of the krankenkassen. For example, only such physicians are admitted to health insurance practice as have had at least two years' experience in Berlin. Physicians who have not had three years' previous krankenkasse experience must furnish evidence that they have pursued a course in social medicine. For gross errors in the performance of medical duties, or by reason of dishonorable conduct, physicians may be refused admission to health insurance practice. Likewise, disciplinary measures are set up, the application of which may result in the exclusion of a physician from the panel or official list. Committees of control exercise a supervision over the active work of physicians, especially as regards the prescribing of remedies. The duration of the contract agreement covers a term of five years.

Marriages

JAMES LORNE MANION, Lieut., M. C., U. S. Navy, New York, to Miss Waltona Wilkins Burns, at Sarasota, Fla., April 25.

FRANK BARTHLOMEY PUSKUNIGIS, Westfield, Mass., to Miss Anastasia Pranaitis of Ludlow, May 3.

Deaths

William L. Barker, San Antonio, Texas; University of Louisiana, New Orleans, 1874; aged 68; a member of the State Medical Association of Texas; founder and physician in charge of W. L. Baker's Sanitarium, San Antonio; alderman of San Antonio for six years; for many years superintendent of the Southwestern Insane Asylum, San Antonio; city physician of Waco, 1885-1891; died, May 1.

John Kepke ● Brooklyn; St. Paul Medical College, 1888; Bellevue Hospital Medical College, 1890; aged 60; at one time surgeon to Charity and Lutheran hospitals, Brooklyn, Skin and Cancer Hospital, New York; visiting physician to Good Samaritan and Eastern dispensaries, New York, and Bushwick Hospital, Brooklyn; died, May 1.

Guy W. Williams, Forsyth, Ga.; Atlanta (Ga.) School of Medicine, 1913; aged 32; a member of the Medical Association of Georgia, and president of the Monroe County Medical Society; lieutenant, M. C., Ga. N. G., and discharged June 19, 1919; died, April 21, from heart disease.

Pierre Norbert Bergeron ● Philadelphia; Jefferson Medical College, Philadelphia, 1902; aged 52; physician to St. Joseph's Hospital; died in that institution, May 12, from septicemia following an infected wound of the hand, sustained while performing an operation.

Albert Pickett Dickson, Raeford, N. C.; University of the City of New York, 1878; aged 67; a member of the Medical Society of the State of North Carolina; first president of the Hoke County Medical Association; died, April 14, from cerebral hemorrhage.

Alden E. Smith, Freeport, Ill.; Chicago Homeopathic Medical College, 1884; aged 60; a member of the Illinois State Medical Society; president of the Illinois Homeopathic Medical Association in 1908; a veteran of the Spanish-American War; died, May 3.

Arthur Bennett Moroney, Boston; Harvard University Medical School, 1876; aged 71; professor of clinical medicine and physiology in the College of Physicians and Surgeons, Boston; a member of the Massachusetts Medical Society; died, May 3.

Robert Roy Brownfield ● Phoenix, Ariz.; Medico-Chirurgical College of Kansas City, Mo., 1903; aged 40; president of the Maricopa County Medical Society in 1919; died, May 1, from injuries received in an automobile accident.

Julius Carl Bierwirth ● Brooklyn and Long Island, N. Y.; College of Physicians and Surgeons in the City of New York, 1885; aged 64; captain, M. C., U. S. Army, and discharged, Dec. 12, 1918; died, May 2, from heart disease.

Oscar D. Rodney, Mount Calm, Texas; Hospital College of Medicine, Louisville, 1891; aged 56; a member of the State Medical Association of Texas; at one time health officer of Mount Calm; died, April 26, from peritonitis.

Joseph Rial Lancaster, Tillsonburg, Ont.; University of Toronto, Ont., 1895; aged 47; died, April 17, from injuries received March 24, when the automobile in which he was riding was struck by an express train.

John A. Schafmeister, Ossining, N. Y.; New York Homeopathic Medical College and Hospital, New York, 1889; aged 62; health officer of Ossining, and at one time health officer of Westchester County; died, May 2.

William Chambers Powell, Jr. ● Bryn Mawr, Pa.; Hahnemann Medical College and Hospital, Philadelphia, 1911; aged 34; lieutenant, M. C., U. S. Army, during the World War; died, May 5, from typhoid fever.

Frederick J. White, Moncton, N. B.; McGill University, Montreal, Que., 1886; L.R.C.P. (London) and R.C.S. (Eng.), 1888; aged 57; died, April 10, from cerebral hemorrhage.

● Indicates "Fellow" of the American Medical Association.

Daniel Edward Esterly ● Topeka, Kan.; University of Pennsylvania, Philadelphia, 1893; aged 54; a member of the American Academy of Ophthalmology and Oto-Laryngology; died, May 8.

Erastus G. Goodman, Lanvale, N. C.; University of Maryland, Baltimore, 1891; aged 60; a member of the Medical Society of the State of North Carolina; died, April 28, from tuberculosis.

George M. Stites, Williamstown, Pa.; College of Physicians and Surgeons, Baltimore, 1882; aged 60; a member of the Medical Society of the State of Pennsylvania; died, April 29.

John H. Green, Galena, Kan.; Indiana Medical College, Indianapolis, 1878; aged 76; a member of the Eighty-Fourth Indiana Regiment during the Civil War; died, April 24.

Newton B. Morse, Wyoming, Ill. (license, years of practice, Illinois, 1878); aged 83; a member of the Illinois State Medical Society; died, April 27, from cerebral hemorrhage.

Rynear Beach Covert, Seneca Falls, N. Y.; Homeopathic Medical College of the State of New York, New York, 1868; aged 76; a veteran of the Civil War; died, April 15.

Archibald Malcolm MacLean, Leadville, Colo.; University of Michigan, Ann Arbor, 1874; aged 68; a member of the Colorado State Medical Society; died, April 21.

Madison LeGrande Blake, Riverside, R. I.; Tufts College Medical School, Boston, 1894; aged 66; a member of the Massachusetts Medical Society; died, April 22.

Henry F. Held ● Cincinnati; Cincinnati College of Medicine and Surgery, 1889; aged 60; died, April 30, from septicemia, the result of a defective tooth.

Paul Jerome Anderson ● Oakland, Calif.; Cooper Medical College, San Francisco, 1910; aged 35; died in Honolulu, Hawaii, April 20, from pneumonia.

George Lewis Smith ● Jefferson, Wis; Rush Medical College, 1879; aged 65; physician to the Jefferson County Insane Asylum, Jefferson; died, April 15.

Joseph Milford Merchant, Warren, R. I.; Medical School of Maine, Brunswick and Portland, 1858; aged 87; a veteran of the Civil War; died, April 15.

David A. Jackson, Vick, Ark.; University of Louisiana, New Orleans, 1877; a member of the Arkansas Medical Society; died, February 18.

Augustus Bryant Sholars, Little Rock, Ark.; University of Louisiana, New Orleans, 1861; aged 84; a Confederate veteran; died, April 25.

Edward A. Thomas, Wytheville, Va.; University of Virginia, Charlottesville, 1890; aged 52; died, April 26, from heart disease.

Alfred Westland Nixon, Georgetown, Ont.; Trinity Medical College, Toronto, 1891; aged 57; died, April 8, from cerebral hemorrhage.

William W. Walters, Greenback, Tenn.; Kentucky School of Medicine, Louisville, 1891; aged 59; died, April 23, from pneumonia.

James Marion Donald, Marion Junction, Ala.; Medical College of Alabama, Mobile, 1884; aged 57; died in Selma, Ala., April 10.

John Monroe Armstrong ● Alhambra, Calif.; University of Michigan, Ann Arbor, 1885; aged 64; died in Pasadena, Calif.; April 23.

Joseph B. Thomasson, Delight, Ark.; University of Arkansas, Little Rock, 1894; aged 58; died, April 26, from septicemia.

William R. Sparling, Edam, Sask.; University of Manitoba, Winnipeg, 1898; aged about 55; died, April 14, from septicemia.

Charles Howard Lanphaer, Worcester, Mass.; Homeopathic Hospital College, Cleveland, 1880; aged 81; died, April 16.

Louis Bradford Couch, Nyack, N. Y.; New York Homeopathic Medical College, 1874; aged 69; died, April 20.

James Webb Curtis, Hot Springs, Ark.; Howard University, Washington, D. C., 1898; aged 64; died, April 19.

George Upton McComas ● New Canton, Ill. (license, Illinois, 1888); aged 62; died, April 20.

Richard Mowrey Riegle, Hillsboro, Kan. (license, Kansas, 1901); aged 61; died, April 22.

Correction.—The notice of the death of Dr. George E. Ellis, Dunkirk, N. Y., which appeared in THE JOURNAL of April 23, page 1185, is incorrect. Dr. Ellis writes that he is good health.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION, OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER GENERAL MATERIAL OF AN INFORMATIVE NATURE

MORE MISBRANDED NOSTRUMS

Abstracts of Recent Notices of Judgment Issued by the Bureau of Chemistry of the United States Department of Agriculture

Murphey's Second Summer Remedy.—Edward Kirkwood, Madisonville, Ky., shipped in August, 1917, a quantity of Murphey's Second Summer Remedy" which was alleged to be manufactured by the Murphey Medicine Co., Inc., Madisonville, Ky. The federal chemists reported that analysis showed this to be an emulsion consisting essentially of a watery mixture containing alcohol, sugar, castor oil, plant material and traces of peppermint oil and morphin. It was falsely and fraudulently represented as an effective treatment for teething and as a cure for "summer complaint" and flux in children. It was also misleadingly described as "The Baby's Friend" and thus represented as a preparation that could be administered to infants with safety when, as a matter of fact, it contained morphin. In November, 1919, Kirkwood pleaded guilty and was fined $25.—[*Notice of Judgment No. 8553; issued April 25, 1921.*]

Ludlum's Paste.—The Williams Mfg. Co., Cleveland, Ohio, shipped in December, 1917, a quantity of this product which the federal authorities declared misbranded. Analysis of the article by the Bureau of Chemistry showed that it consisted of copaiba, cubebs and oil of sassafras in a fatty base. It was falsely and fraudulently represented as a cure for gonorrhea. In June, 1920, judgment of condemnation and forfeiture was entered and the court ordered that the product be destroyed.—[*Notice of Judgment No. 8556; issued April 25, 1921.*]

Prickly Ash, Poke Root and Stillingia Compound with Iodids.—This preparation, shipped by the Allan-Pfeiffer Chemical Co., St. Louis, Mo., in July, 1919, was declared misbranded. The Bureau of Chemistry reported that analysis showed it to consist of plant extractives including a laxative drug, potassium iodid, alcohol, sugar and water. It was falsely and fraudulently labeled as a "blood purifier" and a remedy for syphilis, cancer, rheumatism, etc. In November, 1919, judgment of condemnation and forfeiture was entered and the court ordered that the product be destroyed.—[*Notice of Judgment No. 8563; issued April 25, 1921.*]

Gauvin's Cough Syrup.—J. A. E. Gauvin, Lowell, Mass., shipped in October, 1919, a quantity of this product which the federal authorities declared was misbranded. The government chemists reported that analysis showed it to consist essentially of extractives of wild cherry bark, spruce gum, sugar, alcohol and water. It was falsely and fraudulently recommended as an efficient remedy for all throat and pulmonary diseases, coughs, colds, catarrh, asthma, whooping cough, influenza, etc. In June, 1920, judgment of condemnation and forfeiture was entered and the court ordered that the product be destroyed.—[*Notice of Judgment No. 8576; issued April 25, 1921.*]

Meyer's Red Diamond Kidney Tablets and Compound Extract of Sarsaparilla with Iodid of Potassium.—The Meyer Drug Company, St. Louis, Mo., shipped in January, 1918, a quantity of these two articles which the federal authorities declared were misbranded. Analysis of the "kidney tablets" by the Bureau of Chemistry showed that they contained salts of benzoic and boric acids, atropin and vegetable extractives among which were those of buchu and hydrangea. The tablets were falsely and fraudulently represented as effective cures for diseases of the kidneys, liver and urinary organs,

lumbago, rheumatism, Bright's disease, diabetes, gravel, catarrh of the bladder and kindred diseases.

The "extract of sarsaparilla" was reported by the federal chemists to consist essentially of a syrup containing caramel, vegetable extractives, among which were those of glycyrrhiza and probably sarsaparilla, small amounts of potassium iodid, ferric chlorid and alcohol. This product was falsely and fraudulently represented as an effective cure for ringworm, tumors, syphilis, chronic rheumatism, etc. In November, 1920, the defendant company entered a plea of *nolo contendere* and was fined $25 and costs.—[*Notice of Judgment No. 8581; issued April 25, 1921.*]

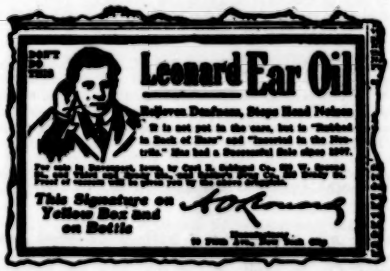
Leonard Ear Oil.—A. O. Leonard, New York City, shipped in August, 1919, a quantity of this nostrum which the federal authorities declared was misbranded. When analyzed by the Bureau of Chemistry it was found to consist essentially of camphor, oil of eucalyptus and traces of alkaloids in a base of mineral oil. The following claims appeared on or in the trade package:

"A Glandular . . . Oil recommended for relief of Deafness, Head Noises, Discharging, Itching, Scaly Ears . . . and Ear Ache . . . Deafness, and Ear Troubles."

". . . dry, itching, aching and discharging ears."

". . . for Relief of Catarrhal Deafness . . . and other kinds of deafness and ear troubles . . ."

"Has relieved the deafness and head noises of more people than any known remedy . . ."



These claims were declared false and fraudulent "since the article contained no ingredient or combination of ingredients capable of producing the effects claimed." In March, 1920, judgment of condemnation and forfeiture was entered and the court ordered that the product be destroyed.—[*Notice of Judgment No. 8591; issued April 25, 1921.*]

Correspondence

THE SHEPPARD-TOWNER BILL

To the Editor:—The letter of Mrs. William Lowell Putnam, in THE JOURNAL, April 30, deserves more than a passing notice; not only for its quality and sense, but also because she pays her respects to "all-the-women-in-the-country-behind-us" bugaboo.

How legislators, state and national alike, ever allowed that incubus to fasten itself around their necks has always been a mystery to me. The proportion of club women to the female population is so small as to seem negligible. But because of organization of the few, they so far have claimed to represent the whole and *been believed*, which is absurd.

My experience with the Sheppard-Towner bill was, very likely, the experience of the majority of women who have been asked to sign petitions to congressmen and senators advocating its passage. No argument was advanced to convince me, other than that some members of the woman's club said it was all right because it had to do with babies—and they wanted all the names they could get and it really wouldn't take a minute to put your name down, and lots of others would sign if we did—and so on, and so on.

The Women's Voters' League, at the last election, ordered local representatives to get the standing of each nominee for Congress on the bill. They must have been supplied with a stock speech, for I listened to that terrible arraignment of a Congress which cared more for the welfare of pigs than for mothers and babies until I believe I could speak the piece myself.

The statement that the women of America are solidly back of any piece of legislation whatever is untrue. The women who belong to the various organizations which try to influence legislation may be, but even they are not "solid," for many are members and pay dues who never attend meetings or vote. If instead of wiring a congressman that "our club of 300 members" is behind such and such a bill, they wired that fifteen or thirty or forty members who were present at the meeting voted to get behind the bill, it would give a more truthful picture of what really happened.

The bill is absolutely vague about everything but its title and the amount of money to be appropriated. That half of the state members of the advisory committee shall be women explains itself—but why no limit on the number of employees, or expenses for offices, or for travel expenses? To a mere onlooker, the chances of such a bill being merely a political machine seem very great. Women naturally are vitally interested in babies—about to be born, already born, or of school age—and any legislation on these topics will always gain their attention. But because some work for bills which give unlimited opportunity for handing out jobs, without demanding a specific statement of how many employees, and how much expense money, does not say that all of the sex are so unbusiness-like.

Furthermore, it is a question why the rights of the separate states should be invaded by the federal government. Paternalism and centralization of power have always been looked on as socialistic doctrines, and as far back as American history goes, the fight for states' rights has been waged.

If the bill must be law, why is it in the Department of Labor, instead of Health? Medicine is a profession, not an industry, and absolutely distinct from any of the welfare societies. Anything pertaining to maternity, whether the mother or unborn child is under consideration, certainly is in the category of medicine—unless overnight some bill has been passed eliminating the doctor entirely from maternity cases.

The statement of the women opposed to suffrage that the bill as propaganda was carried on by birth control advocates is enlightening, in view of the fact that at the national meeting of the Women's Voters' League at Washington, D. C., some time ago (according to the press dispatches), a woman worked openly for advocacy of the members for birth control.

I am the wife of a physician, but my views are expressed as a woman's, without regard to the attitude of the medical profession toward this bill.

EVE SHERRER, Easton, Pa.

To the Editor:—The opposition to the Sheppard-Towner bill which I heard last week from the National Association Opposed to Woman Suffrage, various medical liberty leagues, the American Drugless Association, which includes chiropractors, naturopaths, mechanotherapists, etc., antivivisection societies, antivaccination societies, and the Citizens' Medical Reference Bureau opposed to Compulsory Medicine, and again Mrs. Putnam's challenge to the medical profession to oppose this bill, which appeared in THE JOURNAL, April 30, and was endorsed by the editor, makes me feel that I wish to

lay before the readers of THE JOURNAL another medical point of view.

I believe that the profession should support this measure, for:

1. Its purpose is clearly one to stimulate the states to do work which is properly their duty. It is entirely permissive; no state need accept the offer of the federal government unless it wishes to. Each state may work out its own plan as adapted to its own peculiar needs. The federal government's rôle is merely one of approval of state plans and the making of studies and reports which will be helpful.

2. There is no question in the minds of those who are urging the passage of this bill that the actual care of pregnancy, labor and the puerperium is other than medical. No one, however, can deny that the availability and the intelligent use of medical care in large areas of our country depend on educational, economic and social factors of the greatest importance. And as I understand this bill, its purpose is to make such care available by special attention to these educational, economic and social factors. The doctor will not have his work interfered with, but, as I see it, will have material assistance. A public health nurse and a consultation center in a county can do no other than provide the overworked country doctor with aid and equipment with which to work. Her instructions to mothers in nontechnical language, and practical demonstrations in the home will go far toward lessening the burden of the doctor and toward increasing his usefulness by making it possible for him to serve larger numbers. No one who has worked in child welfare centers in the larger cities, or has seen the work of public health nurses, or made use of social service departments, wishes to return to the old method.

Again, the objection which Mrs. Putnam raises to the administration of this bill by the Children's Bureau is certainly based on insufficient knowledge. The Children's Bureau has a hygiene division, the staff of which is made up of competent physicians and public health nurses. Its chief is Dr. Anna Rude. This division has always had charge of all matters relating to hygiene and medicine, and there is no reason to suppose that it will not continue to direct such matters as come under the jurisdiction of the bureau. Moreover, it has always had the advice and cooperation of the leading medical men and women in the country, among whom at the present time are an advisory committee of pediatricians from the Section on Diseases of Children, of the American Medical Association.

I hope, therefore, that the medical profession will back this bill, as the best expedient thus far suggested to promote the hygiene of maternity and infancy. It seems to me to be an honest effort to give impetus to a movement for improving an obvious need.

ELLA OPPENHEIMER, M.D., Washington, D. C.

UNIVERSAL PHYSICAL TRAINING

To the Editor:—It is difficult for me to discuss in a cold-blooded way a subject which to me has never admitted of discussion. No man is a whole man, or a real citizen, to whom his duty to give his willing service to his country in peace and in war is not a self-evident proposition. As a result of the general postbellum reaction, the words "military" and "compulsory," are not in good odor with the laity, so that I shall use them with care. In fact, that good old word "patriotism" has been so overworked during and since the war that it seems to have lost much of its original significance. In spite of the prevailing apathy, the time is ripe for another national movement to bring again before the country, from a medical standpoint, the vital importance of increasing the physical, as well as mental and moral, standard of the American youth.

It is unnecessary to refer to our draft statistics, showing the high percentage of rejection of those unfit for military service, the large proportion of those mentally defective and illiterate, and other figures which are not pleasant reading. The number of recruits that actually reached the fighting line, after the weeding-out process here and abroad, is a striking commentary on our actual man power, however. Every medical officer who had experience in the advance zone can testify as to the poor physical condition of many of the hastily levied organizations, and was thankful that we were called on to take part in a "war of movement." Our boys were good fighters, but they would have been poor stayers, as shown by the general slump in discipline after the armistice.

But we are not yet through with the mental and physical unfit, as shown by the increasing morbidity among ex-service men, especially those who never reached the fighting line. If it is the essential virtue of the good soldier to "endure hardship," we may be thankful that they did not get across the sea. It would seem to be no exaggeration to infer that 40 or 50 per cent. of the 4,000,000 "veterans" of the late war would not have lasted through a campaign of a year.

What are we going to do about it? Talk is cheap. Our people balk at any movement savoring of preparation for war in time of peace. Well, then, let us return to our medical point of view. Let us appeal to them along the line of public welfare, a question which has recently awakened general interest in view of the long-hoped-for prominence which it is receiving under the new administration. Certainly, of all the bureaus under the proposed Department of Public Welfare the educational is one of the most important, and we are assured that universal physical training (not voluntary, but compulsory, we trust) will be earnestly considered. That we should be behind the French, Australians, New Zealanders and Swiss in organizing this system is unthinkable.

A report from the secretary of the Military Training Camps Association, just received, contains this paragraph: "It is clear that we can count on the loyal support of the entire medical profession as favoring universal military training."

They certainly can count on us, especially in the American Medical Association, which was such a powerful agent in recruiting the more than 30,000 medical officers of the Reserve Corps, whose record speaks for itself. The Caduceus Post, American Legion of New York City, numbering over 400 former officers of the Medical Corps, U. S. Army and U. S. Navy, is deeply in earnest about this subject and has requested the House of Delegates to bring it before the Association at the coming session for general discussion.

HENRY C. COE, M.D., New York.

FALL OF BLOOD PRESSURE AFTER INJECTIONS OF NEO-ARSPHENAMIN

To the Editor:—In a number of cases of high blood pressure in which syphilis was the dominating factor, I have found that after an intravenous injection of neo-arsphenamin the blood pressure falls from 10 to 14 mm. I never had a fall less than 10 or more than 14. I have concluded, therefore, that high blood pressure should not militate against intravenous employment of neo-arsphenamin when the high blood pressure is due to syphilis. I have had disagreeable symptoms only once, and that was in a case of syphilis in which the blood pressure was 102; in that case I had a fall of 12 mm. The blood pressure always returns to its former degree within thirty-five minutes after administration of the neo-arsphenamin. The diastolic pressure always falls in proportion to the fall of the systolic pressure. I have found no mention in the literature of the effect on blood pressure following the intravenous use of neo-arsphenamin.

J. PHILLIP KANOKY, M.D., Kansas City, Mo.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted on request.

DERMATITIS FROM ARSPHENAMIN

To the Editor:—I have a patient who has developed a general erysipeloid condition of her skin as a result of neo-arsphenamin administration, the eruption coming on after the sixth dose of 0.6 gm. The condition is of about four weeks' standing, and while there is some improvement, the skin is not clearing up very fast. There has been no elevation of temperature; the general condition is good. The eruption covers the limbs, trunk, face and neck, and is accompanied by the most intensive pruritus that I have ever seen any one suffer from. There is a constant exfoliation of the skin, and the skin from the hands has come away in almost complete glovelike casts. I have been unable to find anything in the way of oils or aqueous applications, alkaline or acid in reaction, that has given anything but a temporary relief from the intensive itching. The urine has remained free from any albumin. The patient's appetite and digestion are good, and the skin does not show any abscess or pus formation with the exception of a few places where the patient has torn up the skin in scratching, and these places heal very readily.

O. H., West Virginia.

ANSWER.—This patient evidently has a general exfoliative dermatitis as the result of the administration of arsphenamin. It is a well known result from the use of arsenicals, particularly arsphenamin, and is a danger signal of great importance in its administration. If the drug is persisted in after the dermatitis develops, it is likely to become universal; damage to the kidneys develops, and death has been the result in many cases. Arsphenamin should be discontinued immediately in such a case, and should not be again given except with the greatest caution. In cases like the present one the patients should have their elimination stimulated by the abundant drinking of water, and by measures to keep the bowels freely open. They should have rest from their occupation, and be kept in bed. Ointments are comfortable because they tend to overcome the dryness of the skin and to protect the surface. As good an ointment as any for use in the cases is ointment of rose water. This should be spread on freely at least twice a day, and may be used oftener.

LUMINAL—RELAPSE IN SCARLET FEVER

To the Editor:—1. Please describe the action of Luminal, a narcotic made by the Winthrop Chemical Company of New York. After it has been given over a length of time, will it cause an eruption? Is there any danger of its producing a desire to the extent of habit formation? Does it leave the patient in a depressed state after the effects wear off?

2. Please furnish me with information regarding the relapse of scarlet fever. I have a case that has been under my care for the last thirty days. It began with what looked to be a typical case of scarlet fever, and ran along for about six or eight days. The eruption faded, to reappear again in about one week. It remained for about three days, and reappeared again in about three days. It then gradually disappeared.

WILLIAM HIBBITTS, M.D., Texarkana, Ark.-Texas.

ANSWER.—1. Luminal is not a narcotic, but a product closely related to barbital (New and Nonofficial Remedies, 1921, p. 56). A number of cases of dermatitis from luminal have been reported. The danger of habit formation should be equivalent to that which has been attributed to barbital (veronal), and the depressing effects appear to be similar to those produced by other soporifics. Reports on the action of luminal are given by:

Grinker, Julius: Experiences with Luminal in Epilepsy, THE JOURNAL, Aug. 28, 1920, p. 588.
Reynolds, C. E.: Experiences with Luminal in Epilepsy, Correspondence, THE JOURNAL, Sept. 18, 1920, p. 830.
Sands, I. J.: Luminal Therapy in the Control of Epileptic Seizures, *Arch. Neurol. & Psychiat.* 5:305 (March) 1921.

2. It is unusual for an eruption in scarlet fever to reappear with the same intensity as on its first appearance, but the condition is not extraordinary. According to Ker, such rashes make their appearance in severe cases, usually of the type known as "septic scarlatina." He also remarks that relapse, though extremely uncommon, is a well established phenomenon, usually occurring in the fourth or fifth week of the illness and sometimes not to be distinguished from the original attack.

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

ARIZONA: Phoenix, July 5-6. Sec., Dr. Ancil Martin, 207 Goodrich Bldg., Phoenix.
CALIFORNIA: San Francisco, June 27-30. Sec., Dr. Charles B. Pinkham, 727 Butler Bldg., San Francisco.
COLORADO: Denver, July 5. Sec., Dr. David A. Strickler, 612 Empire Bldg., Denver.
DELAWARE: Wilmington, June 21-23. Sec., Dr. P. S. Downs, Dover.
FLORIDA: Jacksonville, June 13-14. Sec., Reg. Bd., Dr. William M. Rowlett, Citizens Bank Bldg., Tampa.
GEORGIA: Augusta, June 1-3 and Atlanta, June 8-10. Sec., Dr. C. T. Nolan, Marietta.
ILLINOIS: Chicago, June 20-23. Supt. of Registration, Mr. F. C. Dodds, Springfield.
IOWA: Iowa City, June 9-11. Sec., Dr. Guilford H. Sumner, Capitol Bldg., Des Moines.
LOUISIANA: New Orleans, June 9-11. Sec.Treas., Reg. Bd., Dr. Roy B. Harrison, 1551 Canal St., New Orleans.
MAINE: Augusta, July 5-6. Sec., Dr. Frank W. Searle, 140 Pine St., Portland.
MICHIGAN: Ann Arbor, June 14. Sec., Dr. B. D. Harison, 504 Washington Arcade, Detroit.
MINNESOTA: Minneapolis, June 7-9. Sec., Dr. Thomas S. McDavitt, 539 Lowry Bldg., St. Paul.
MISSISSIPPI: Jackson, June 21-22. Sec., Dr. W. S. Leathers, University.
MISSOURI: St. Louis, June 13-15. Act. Sec., M. E. Halloway, State House, Jefferson City.
NATIONAL BOARD OF MEDICAL EXAMINERS, Boston, June 14-21. Sec., Dr. J. S. Rodman, 1310 Medical Arts Bldg., Philadelphia.
NEBRASKA: Lincoln, June 8-10. Sec., Dept. of Public Welfare, Mr. H. H. Antles, State House, Lincoln.
NEW JERSEY: Trenton, June 21-22. Sec., Dr. Alexander MacAlister, State House, Trenton.
NEW YORK: Albany, Buffalo, New York and Syracuse, May 23-26. Ass't., Professional Examinations, Mr. Herbert J. Hamilton, State Education Bldg., Albany.
NORTH CAROLINA: Raleigh, June 21. Sec., Dr. Kemp P. B. Bonner, Morehead City.
NORTH DAKOTA: Grand Forks, July 5-8. Sec., Dr. G. M. Williamson, Grand Forks.
OHIO: Columbus, May 31-June 3. Sec., Dr. H. M. Platter, State House, Columbus.
OREGON: Portland, July 5-7. Sec., Dr. Urling C. Coe, 1208 Stevens Bldg., Portland.
RHODE ISLAND: Providence, July 7-8. Dr. Byron U. Richards, State House, Providence.
SOUTH CAROLINA: Columbia, June 28. Sec., Dr. A. Earle Boozer, 1806 Hampton St., Columbia.
TENNESSEE: Memphis, Nashville and Knoxville, June 10-11. Sec., Alfred B. De Loach, 1001 Exchange Bldg., Memphis.
TEXAS: Galveston, June 21-23. Sec., Dr. Thomas J. Crowe, 918-919 Dallas Co. Bank Bldg., Dallas.
VIRGINIA: Richmond, June 14-17. Sec., Dr. J. W. Preston, 511 MacBain Bldg., Roanoke.
WISCONSIN: Milwaukee, June 28-30. Sec., Dr. J. M. Dodd, 220 E. Second St., Ashland.
WYOMING: Cheyenne, June 6-8. Sec., Dr. J. D. Shingle, Citizens National Bank Bldg., Cheyenne.

North Dakota January Examination

Dr. George M. Williamson, secretary, North Dakota State Board of Medical Examiners, reports the oral, written and practical examination held at Grand Forks, Jan. 4-7, 1921. The examination covered 13 subjects and included 105 questions. An average of 75 per cent. was required to pass. Of the 3 candidates examined, 2 passed and 1 failed. Four candidates were licensed by reciprocity. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
University of Minnesota Medical School		(1920)	86.5, 84.8
	FAILED		
Women's Medical College of Pennsylvania		(1908)	62.9
College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Rush Medical College		(1915, 2)	Illinois
University of Louisville		(1911)	Kentucky
Harvard University		(1896)	Iowa

Utah January Examination

Dr. C. L. Olsen, corresponding secretary, Utah Board of Medical Examiners, reports the written examination held at Salt Lake City, Jan. 3-4, 1921. The examination covered 15 subjects and included 100 questions. An average of 75 per cent. was required to pass. Two candidates were examined, both of whom passed. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
St. Louis College of Physicians and Surgeons		(1920)	79.1
Western Reserve University School of Medicine		(1920)	78.3

Book Notices

THE OXFORD MEDICINE. By Various Authors. Edited by Henry A. Christian, A.M., M.D., Hersey Professor of the Theory and Practice of Physic, Harvard University, and Sir James Mackenzie, M.D., F.R.C.P., LL.D., Consulting Physician to the London Hospital. In Six Volumes. Volume III. Diseases of the Digestive System, Kidneys, and Ductless Glands. Cloth. Price, $90 per set. Pp. 828, with illustrations. New York: Oxford University Press, 1921.

This volume is devoted to disease of the gastro-intestinal tract, nephritis and disturbances affecting the suprarenal, pituitary, thyroid and parathyroid glands. The contributors include two English and eleven American physicians. The section on diseases of the esophagus by Frothingham is an excellent presentation of the subject; it would be more valuable if accompanied by reproductions of roentgenograms, which play so large a part in the diagnosis of such conditions. Rehfuss' article covers all the diseases of the stomach with the exception of ulcer. The views expressed are sound and based on careful laboratory and clinical study, most valuable, perhaps, being the sections on the interpretation of the laboratory findings. Sippy covers the subject of ulcer of the stomach and duodenum, and gives his method of treatment in great detail. There are several pages on roentgenologic examination. Charles G. Stockton, in his discussion of the diseases of the intestine, provides numerous excellent reproductions of roentgenograms, a feature noticeable by its absence from the articles previously mentioned. Sir Humphry Rolleston has contributed a well written analysis of the diseases of the liver, gallbladder and bile ducts. No attempt has been made apparently by the American editors to translate the reference to pharmacopeial products used in Great Britain. Like many other European physicians, Sir Humphry Rolleston seems much inclined to recommend visits to famous springs and spas. Joseph A. Pratt contributes the section on the difficult subject of diseases of the pancreas. Pincoffs and Boggs recognize that there is no medical treatment for diseases of the peritoneum, and are practical in their discussion of the necessary therapy, before and after operation. The discussion of nephritis by one of the chief editors, Henry A. Christian, is an example of good English writing and of the teaching of medicine by the case method. The suggestions for treatment, including good illustrative diets, are especially valuable. The emphasis laid on methods of treatment without drugs is an important feature of this section of the book. Sir John Rose Bradford has a short article on war nephritis, which goes, however, little if any beyond his article on the same subject in the *Quarterly Journal of Medicine* several years ago. The sections of the book on diseases of the glands of internal secretion, by Riesman and Horrax, are a welcome addition to a rapidly developing field of medical science. The article by Horrax is illustrated, and is thereby a distinct improvement over the articles containing no illustrations. On the whole, this volume measures up well with the previous volumes of the series.

THE DISEASES OF THE NEWBORN. By Dr. August Ritter von Reuss, Director of the Department for the Newborn at the First University Women's Clinic in Vienna. Cloth. Price, $12.50. Pp. 626, with 90 illustrations. New York: William Wood & Co., 1921.

It appears that Schauta, at the suggestion of Escherich, established a department for the new-born in the clinic for diseases of women in Vienna, and this department was placed under the charge of an assistant in the children's clinic. The author of this book took charge of the clinic for the newborn in 1911, and soon afterward he also began to give instruction to midwives in the case of the new-born as well as of children in general. From the date of the preface the book appears to have been ready in January, 1914; but there is no statement on the title page or any other place telling whether the book is written in English or translated. Be that as it may, the language and style are quite satisfactory. There are nine parts: (1) physiology; (2) feeding; (3) the premature child; (4) constitutional weakness and constitutional diseases; (5) birth injuries; (6) diseases of individual organs and systems (the largest part); (7) hemorrhages and hemorrhagic diseases; (8) general diseases of obscure etiology, and (9) infectious and septic diseases. There is an extensive bibliography arranged alphabetically according to authors' names cited in the text, and here one misses many names of American authors of substantial contributions in this field. The author has done his work well and thoroughly. An earnest attempt is made to present the present knowledge of the physiology and pathology of the new-born. After a fairly exhaustive search, we can record only one omission of a definite disease of the new-born, and that is diphtheria of the navel. There is an immense amount of useful information and discussion in this book which should be studied carefully by all physicians who have to attend the new-born—the obstetrician, the pediatrician and, last but by no means least, the general practitioner.

LA LITIASIS BILIAR EN LA REPÚBLICA ARGENTINA. Por Luis Agote, Profesor Titular de Clinica Médica de la Universidad de Buenos Aires. Paper. Pp. 305, with 54 illustrations. Buenos Aires: L. J. Rosso y Cia. 1920.

To American readers Dr. Agote is chiefly known as the inventor of the citrate method of blood transfusion. He has now collected in a volume the lectures on gallbladder disease given by him during the last two years in his new capacity as director of the Model Institute of Clinical Medicine, so highly praised in THE JOURNAL recently by Dr. W. J. Mayo. In his studies he takes up successively the different phases of the subject, pathogenesis, symptomatology, diagnosis, prognosis and treatment. He invites attention to the enormous frequency of gallstones among married women, which he attributes to the inflammatory changes caused by conception. He takes issue with Chauffard's views on the cholesterol etiology of gallstones. These, according to him, are connected instead with a physicochemical condition of the bile. He is most decided as to the superiority of surgical treatment. Medical measures, in his opinion, at best are only palliative. Three chapters are devoted to calculus migration, and one to Charcot's hepatalgic fever. Valuable as are his considerations on cholelithiasis, perhaps the most interesting, if not the most important chapter of the book, is the first. This is a lecture delivered in 1915, which attracted much attention, setting out in lofty words the rôle of the physician as regards pain. The book is well illustrated.

A SYNOPSIS OF MEDICINE. By Henry Letheby Tidy, M.A., M.D., B.Ch., Assistant Physician to St. Thomas's Hospital. Cloth. Price, $6.50. Pp. 952. New York: William Wood and Company, 1921.

This is an outline of Sir William Osler's textbook on medicine similar to the outline prepared by Mr. Hey Groves in his Synopsis of Surgery. Dr. Tidy, in addition, however, has added to various sections material taken from periodical literature and books on some special subjects. The section on "Diseases of the Nervous System" has been rearranged. There can be no doubt of the value of such an outline for purposes of review or for preparation in taking various licensing or competitive medical examinations. In certain medical schools, special classes are held for such purposes in which the students prepare outlines and train for examination through repeated trials as to how much the individual student can get down on paper in a minimum amount of time. Of course, the greatest benefit comes to the student who prepares his own outline; but for the lazy man who is disinclined to do this and who is cramming purely for examination purposes, Tidy's book affords an agreeable substitute.

INNERE SEKRETION UND DEMENTIA PRAECOX, EINE STUDIE. Von Oscar Lessing. Boards. Price, 4 marks. Pp. 63. Berlin: S. Karger, 1921.

When we consider so ill defined and mysterious a syndrome as dementia praecox from the standpoint of our inexact and rather speculative understanding of endocrinology, the opportunity for premature enthusiasm, false leads and mistakes reaches a high point. This small monograph, however, seems to be written by one who has kept his feet while treading the maze, and he provides a concise analysis of the main points in this important field. There seems to be no doubt that the balance or regulation of internal secretion is demonstrably upset in dementia praecox, since both hyperfunction and hypofunction are manifest; but whether this is of etiologic importance is not by any means established.

Medicolegal

Questions in Malpractice Case—What the Law Implies

(Osnes v. Scanlon (Iowa), 179 N. W. R. 869)

The Supreme Court of Iowa, in reversing a judgment for $500 damages that was rendered in favor of the plaintiff for alleged malpractice in the treatment of a fracture above the ankle of the bones of one of his legs, says that he did not contend that the defendant did not possess the requisite skill and learning, but his allegations were that the defendant failed to exercise the proper degree of skill. On the trial the defendant was asked whether or not in his treatment of the plaintiff he gave him the benefit of his judgment and best skill. An objection to the question was sustained on the ground that it involved matter for the jury to decide; that the witness could tell what he did, and let the jury judge whether that was the best. That was followed by a question as to whether, in his treatment of the plaintiff, the defendant had at all times given him his best attention, to which an objection was sustained; as also with regard to the questions whether or not he gave him his best skill, and gave him his best judgment. The plaintiff afterward conceded that the ruling was erroneous, under the decision in *Ingwersen v. Carr & Brannon*, 180 Iowa 988, 164 N. W. 217, but he argued that it should not be made the ground of a reversal of the judgment because the mere asking of the question or questions indicated what the answer would be; so that the exclusion of the evidence was not prejudicial. But the supreme court thinks otherwise. The nub of it was that the jury did not have the evidence before it which the plaintiff conceded it was entitled to. The mere fact that the question indicated that the defendant would have answered Yes to the question did not cure the error. A question is not evidence. The fact that the court sustained the objection, said to the jury, in effect, that it should not be considered. The supreme court cannot assent to the proposition that the exclusion of the evidence was nonprejudicial. The very essence of the charge against the defendant was, in effect, that he did not use the proper degree of skill—that he did not exercise the degree of skill possessed by him—that he did not use his best judgment.

Without attempting now to state accurately, or at length, the rule as to the defendant's duty, it is sufficient, in the consideration of the point under review, to say that the rule is given in the books substantially thus: In the absence of a special contract, the law implies that a surgeon employed to treat an injury contracts with his patient: First, that he possesses that reasonable degree of learning and skill which is ordinarily possessed by others of the profession; second, that he will use reasonable and ordinary care and diligence in the exercise of skill, and the application of his knowledge to accomplish the purpose for which he is employed; and, third, that he will use his best judgment in the application of his skill in deciding on the nature of the injury, and the best mode of treatment. In the instant case the trial court instructed the jury substantially to that effect, a part of the instruction being that if "the defendant possessed and used such skill, care and diligence, he was not guilty of negligence." The defendant was asked whether he used his best judgment. No one else could testify as well as he whether he did or not. Of course, if he said he did, it would not be binding on the jury necessarily, but it was entitled to the evidence.

The plaintiff claimed that the spints and cast were so loosely put on as to allow the foot to lie over on the bed, and move at the seat of fracture. Assuming that to be true, a medical witness testified that the effect on the foot would be very painful. He was then asked whether the patient could endure that pain without a sedative, and without the loss of any weight. The supreme court thinks that the question was objectionable, but that possibly the defendant could have elicited the information sought by framing the question somewhat differently; that is, for instance, how severe the pain would be, and whether the effect of that would be to cause the loss of weight, etc. However, the court says that it is not suggesting the form of the question, and that perhaps it would not, on the ground alone of the objectionableness of the question as asked, reverse the judgment which the plaintiff obtained.

No Liability for Damages in Requiring Vaccination

(Zucht v. King et al. (Texas), 225 S. W. R. 267)

The Court of Civil Appeals of Texas, in affirming a judgment for the defendants, says that the plaintiff sought both an injunction and $10,000 damages on account of the alleged unlawful discrimination of the defendants against her in expelling her from the public schools of the San Antonio independent school district because she had not been vaccinated and was unwilling to be vaccinated. The ordinance attacked was not invalid. There is nothing known to the law broader than the long arm of police power to protect the inhabitants of a city in its health. There is no greater authority or responsibility placed on a city than to establish rules and regulations to protect the health and morals of the city. This power did not suddenly come up, but it followed the growth of civilization, in the wake of necessity, progress and science, and the spread of disease; and, as conditions arose and necessity demanded, the inherent power to grapple with it sprang into life and action. Furthermore, there is a very broad distinction between an ordinance requiring children attending schools to be vaccinated and an ordinance, general in its scope, requiring barbers to be vaccinated. In the former case, the children are the wards of the city, to whom the parents intrust them, in a limited sense, for the time being. Coming from various sections, and being kept together in close schoolrooms, a different principle applies to them. And when the court reaches the conclusion, as it does, that the ordinance in question was enacted in pursuance of a grant of wise and valid power, which the legislature expressly delegated to the city council through its charter, "to enforce vaccination," the court pronounces its validity without reference to the actual existence of smallpox or not, although the plaintiff conceded that it existed among certain Mexicans all of the time. If the test of the city's broad power to "enforce vaccination" were that it could be enforced only during a time of epidemic, after many had been consigned to the grave for want of it, it would indeed be a farce. But the test is, Is it a reasonable regulation, such as can be enforced as a preventive at all times in advance of an epidemic?

The board of health is the public agency through which the city council acts to determine the necessity for putting the ordinance into effect; and that is no delegation of legislative power. It lays down the event in which the public health requires the action, and is valid. That there are violations of the act by the officers whose duty it is to enforce it cannot be regarded as a reason to declare the law invalid. Its validity is a shield to those acting within its scope. If officers charged with a public duty were not protected in its enforcement from damages to those who openly defied it, and in turn through anger or resentment seek to subject those charged with its administration to heavy penalties, it would be difficult to secure substantial persons, financially responsible, willing at such a hazard to serve the public. That other pupils not vaccinated were permitted to attend school under similar circumstances, if true, would only show that the officers were not performing a public duty, but could not affect the validity of the law. Having determined the validity of such ordinances, the court must also hold that no cause of action was presented against the defendants, or any of them. This law stands as a shield to protect them from damages in performing a lawful act.

In overruling a motion made by the plaintiff for a rehearing, on the ground that it presented nothing new and was without merit, the court says that the plaintiff complained of its statement, which it considers was justified, that the plaintiff conceded the existence of smallpox in certain localities; but the court is willing to let that go, as such admission, contention or denial has nothing to do with the result of this case, and for that reason the denied concession may be eliminated.

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Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, Boston, June 6-10.
American Association for Thoracic Surgery, Boston, June 6.
American Association of Anesthetists, Boston, June 6-8.
American Climatological and Clinical Association, Lenox, Mass., June 3-4.
American Dermatological Association, Swampscott, Mass., June 2-4.
American Gastro-Enterological Association, Boston, June 4.
American Gynecological Society, Swampscott, Mass., June 2-4.
American Laryngological Association, Atlantic City, May 30-June 1.
American Laryn., Rhinol. and Otol. Society, Atlantic City, June 3-4.
American Medico-Psychological Association, Boston, May 31-June 3.
American Neurological Association, Atlantic City, June 13-15.
American Ophthalmological Society, Swampscott, Mass., June 14-15.
American Orthopedic Association, Boston, June 2-6.
American Otological Society, Atlantic City, June 1-2.
American Pediatric Society, Swampscott, Mass., June 2-4.
American Proctologic Society, Boston, June 3-6.
American Psychopathological Association, Atlantic City, June 11.
American Radium Society, Boston, June 6-7.
American Surgical Association, Toronto, Canada, June 14-16.
American Therapeutic Society, Washington, D. C., June 3-4.
American Urological Association, Montreal, June 2-4.
Association for the Study of Internal Secretions, Boston, June 6.
Association of American Peroral Endoscopists, Atlantic City, June 1.
Conference of State and Provincial Health Authorities, Boston, June 3-4.
Interstate Association of Anesthetists, Niagara Falls, June 1-3.
Maine Medical Association, Bangor, June 28-29.
Massachusetts Medical Society, Boston, May 31-June 1.
Michigan State Medical Society, Bay City, May 24-26.
Missouri State Medical Association, St. Joseph, May 24-26.
Montana Medical Association of, Billings, July 13-14.
National Tuberculosis Association, New York, June 13-17.
Nevada State Medical Association, Elko, June 24-25.
New Hampshire Medical Society, Concord, May 25-26.
North Dakota State Medical Association, Fargo, May 26-27.
Radiological Society of North America, Boston, June 3-4.
Rhode Island Medical Society, Providence, June 2.
South Dakota State Medical Association, Aberdeen, May 24-26.
Southern Minnesota Medical Association, Winona, June 27-28.
Tri-State Meeting (Oregon, Washington and Idaho), Portland, Ore., June 30-July 2.
West Virginia State Medical Association, Charleston, May 24-26.

TENNESSEE STATE MEDICAL ASSOCIATION

The President, DR. L. L. SHEDDAN, Knoxville, in the Chair

Eighty-Eighth Annual Meeting, held at Nashville, April 12-14, 1921

SYMPOSIUM ON SYPHILIS

Recognition of Syphilis and the Syphilitic

DR. JOHN A. WITHERSPOON, Nashville: Correct and careful history taking, and examination of each physiologic system is of importance to determine whether the subject is a syphilitic and whether the lesion is producing the symptoms or is complicating some other disease. Laboratory findings are important adjuncts to the diagnosis but not the controlling ones. In syphilis of abdominal organs, the liver is most frequently affected. In localized syphilis of the liver the left lobe is most frequently involved. I have been impressed with the intermittent attacks of perihepatitis with slight rises of temperature and slight jaundice lasting for only one or two weeks.

The Initial Lesion and Its Differential Diagnosis

DR. TOM R. BARRY, Knoxville: The prevalence of syphilis is about one to every six or seven adults. All venereal ulcers should be regarded as syphilitic until otherwise proved. The history, clinical signs and appearance are to be considered only as presumptive evidence. Without the aid of the laboratory, diagnosis of primary lesion is impossible.

Reaction of Syphilis in New-Born and Growing Child

DR. EDWARD CLAY MITCHELL, Memphis: In the infant, the developing structures are affected profoundly. As the child grows older and development is completed, the symptoms resemble those of the adult type. Syphilis is a familial disease. If a child shows hereditary syphilis, the parents and the other children are syphilitic, unless the disease was acquired by the parents in later life. This fact should be of value in both diagnosis and eradication of the condition. While not infallible, routine Wassermann tests in all pregnant mothers would greatly aid in early diagnosis, especially of the latent type.

DISCUSSION

DR. JOSEPH SMITH, Memphis: Treatment should not be undertaken for the local removal of a lesion until it is proved that it is not syphilitic in origin. Since the discovery of *Spirochaeta pallida* and the Wassermann test, there has been no greater improvement in the diagnosis of the primary lesion than the use of the dark field.

DR. HAZLE PADGETT, Nashville: I have been impressed with the great frequency with which I have found in my necropsy work early degenerative changes in the medium sized blood vessels of the brain in individuals between the ages of 25 and 35 who were syphilitic.

DR. WILLIAM LITTERER, Nashville: The Hecht-Gradwohl method will give positive results in cases in which the Wassermann test is found negative. I have been using the colloidal gold chlorid test with gratifying results, as it helps to differentiate tabes in the paretic stage from neurosyphilis or cerebrospinal syphilis.

DR. W. K. SHEDDAN, Columbia: I fully agree with Dr. Witherspoon, but would make his statement stronger, that every case of aortic lesion in persons under 50 is syphilitic in origin. Cardiovascular diseases of the type described are much more frequent than was formerly suspected.

DR. W. G. SOMERVILLE, Memphis: In the diagnosis of neurosyphilis the most important and early signs are the pupillary changes. Many cases of beginning neurosyphilis present no symptoms except the so-called Argyll Robertson pupil.

DR. OTIS S. WARR, Memphis: The cases of syphilis that come under the observation of the internist are mostly seen in the tertiary stage. I should like to ask Dr. Derivaux to state what he thinks of the significance of a persistently positive Wassermann reaction in those cases subjected to very vigorous antisyphilitic treatment.

DR. JOHN A. WITHERSPOON, Nashville: The manifestations of visceral syphilis are not necessarily late in appearing. In some of these cases of aortitis and in cardiac cases the manifestations appeared as early as six months after the primary sore. In nearly all cases of gastric syphilis I have seen lesions in the central portion of the stomach and some in the cardiac portion, which simulated gastric cancer.

DR. ROBERT C. DERIVAUX, Nashville: We do not know enough about syphilis to say positively that a persistent positive Wassermann means persistent syphilis.

Gastric and Duodenal Ulcer

DR. J. T. MOORE, Algood: Very extravagant claims have been made for gastro-enterostomy. Surgeons have reported as high as from 75 to 95 per cent. cures from this operation; but later review of the cases will not substantiate such claims. In many of these cases jejunal ulcer develops, to the emptying of the acid gastric contents on the new field. It would seem that excision of the ulcer and pyloroplasty by the method of Finney should and does produce more satisfactory results. In the treatment of gastric ulcer it is necessary for the surgeon and general practitioner to cooperate. Proper medicinal treatment will effect apparent cure in 75 or 80 per cent. of the cases.

Diverticula and Diverticulitis of the Sigmoid

DR. DAVID R. PICKENS, Nashville: The possibility of causing trouble depends on three factors: First, being formed by pressure from within, they tend to enlarge; second, they tend to harbor fecal or other harmful content, and third, they tend to undergo various secondary pathologic changes. The chief secondary pathologic changes are: (1) infection of the general peritoneal cavity from thinning of the sac walls without perforation; (2) acute or gangrenous inflammation of the sac—diverticulitis; (3) chronic proliferative inflammation with thickening of the intestinal wall and subsequent stenosis of the bowel—peridiverticulitis; (4) the formation of adhesions between the sigmoid loop and other viscera, especially the small intestine and the bladder; (5) perforation of the diverticula, giving rise to acute general peritonitis, local abscess, submucous fistula of the intestinal wall and fistulous communication with other viscera; (6) the lodgment of foreign bodies in the diverticula; (7) chronic mesenteritis of the sigmoid loop; (8) local chronic peritonitis; (9) metastatic suppuration; (10) secondary development of carcinoma, and (11) perforation into a hernial sac.

Pyothorax

DR. CASA COLLIER, Memphis: The primary causes of empyema may be grouped under three heads: (1) pneumonia; (2) rupturing into the pleura of neighboring abscesses, and here pulmonary abscess is by far the most frequent, or the introduction of infectious material through trauma; (3) metastasis from a distant focus of infection. In the diagnosis of pyothorax, in addition to physical findings, I rely on two procedures—exploratory aspiration and roentgen-ray examination. I frequently combine the two, aspirating under the fluoroscope. The technic of operation consists of the introduction of a No. 14 French catheter, with several small perforations near the end, through a specially constructed trocar into the most dependent portion of the cavity under local anesthesia. The pus is allowed to flow out and is aspirated a little at a time, care being taken to allow no air to enter. The postoperative treatment consists of the maintenance of the negative pressure and the periodic flushing of the cavity with surgical solution of chlorinated soda.

Blood Transfusion and Its Therapeutic Uses

DR. H. QUIGG FLETCHER, Chattanooga: Transfusions in pernicious anemia give immediate benefit when the disease is not too far advanced. In the advanced cases it is of very doubtful value. Secondary anemia calls for transfusion. Transfusion increases the ability of the patient to withstand the operation and to have a rapid postoperative convalescence; it also increases the ability to withstand infection. In surgical cases, when the hemoglobin is 40 per cent. or below, transfusions should be performed until the percentage rises.

Use of Radium in Nonmalignant Uterine Bleeding

DR. WILLIAM SAILER ANDERSON, Memphis: Radium has a definite field in gynecology. In young women with menorrhagia it should be used in small amounts for the initial dose. Abdominal myomectomy is preferable to radium in the treatment of patients under 35 who have definite fibroids with bleeding. Radium is an ideal form of treatment for patients over 35 with a fibrous uterus, or when the fibroid is small with bleeding. Hysterectomy should be done when the fibroid is large, unless contraindicated because of the possibility of degeneration or malignancy. In all cases of suspected malignancy of the fundus, surgery should be the method of choice, even though uterine scrapings are negative.

Radium in Gynecology

DR. SHIELDS ABERNATHY, Memphis: I have seen very extensive inoperable cancers of the cervix undergo most rapid retrogression, the hemorrhage and foul discharge cease entirely, the patients gain in weight and color and experience a sense of such well being and comfort that they know they are cured. Of forty patients, all but four showed marked and rapid improvement. Two of these were cases of primary growths, and two were recurrences following hysterectomy. All were in such an advanced stage that they were not acceptable as radium cases, except for the fact that occasionally the most unbelievable response to radium is seen. Of the two cases of primary growth, one patient died about two months after treatment was terminated, from septic infection which was present when I first saw her. The other three patients mentioned do not seem to have been benefited. In the uncomplicated fibroid of moderate size, it is easier and safer to use radium.

Conservation of Menstrual Function

DR. JOHN B. HASKINS, Chattanooga: Conservation of the reproductive function is of first importance. Conservation of the ovary for the continuance of its internal secretion and its effect on the production of menstruation is second, and even if reproduction is impossible, is of the greatest importance.

Preoperative and Postoperative Management of Abdominal Operations

DR. EUGENE J. JOHNSON, Memphis: In those patients who have been purged prior to operation, it is quite common to see a rise of temperature to 100 or 101 F. the day after operation, and a return to normal on the afternoon of the third day or the morning of the fourth day following a laxative or enema. When patients are not purged prior to operation, disagreeable symptoms are absent and the temperature remains normal. Under no circumstances should a purgative be given in the first postoperative week, because of the likelihood of thrombosis and paresis. When tympanites is very great, any attempt to lessen the condition hurriedly by purgation or other drugs only increases it and makes the patient sicker and more uncomfortable, and for this reason I never resort to the use of pituitary extract, physostigmin, salicylates or other carminatives. Gastric lavage and low enemas, along with insertion of the colon tube, give very satisfactory results. I do nothing else to promote expulsion of gas. In peritonitis I employ morphin to the point of holding the bowel in a splint. The Fowler position, rectal drip of physiologic sodium chlorid solution, 8 per cent. solution of glucose and solution of sodium bicarbonate are routine measures. For renal deficiency, manifested by complete or partial suppression of urine, I have been using the intravenous injection of Fisher's solution with most gratifying results.

SYMPOSIUM ON GALLBLADDER SURGERY

Clinical and Surgical Study of Forty Cases of Cholecystitis

DR. OTIS S. WARR and DR. L. CARL SANDERS, Memphis: Twenty-eight patients complained of a definite qualitative food dyspepsia; thirty gave a history of attacks of epigastric colic; jaundice followed the attack of colic in ten cases. At operation, impacted stones were found in the common duct in three cases. In the remaining thirty cases there was no history of jaundice at any time. In twenty cases, gallstones were found at operation. Thus there were 25 per cent. who gave a history of attacks of colic, and yet no stones were found. Thirty-three of our patients were females. The average age was 45 years. The average duration of symptoms was twelve years. In one there was carcinoma of the gallbladder with metastases into the liver. In four cases the gallbladder had perforated into the liver substance. In four cases the symptoms were acute. In one of these, tuberculosis of the gallbladder and duodenal ulcer were found. In the remaining three a large distended gallbladder filled with pus and stones was removed. In two of the acute cases the gallbladder was easily palpable, but in none of the chronic cases were we able to palpate it. Tenderness over the gallbladder zone was elicited in twenty-nine chronic cases. Cutaneous hyperesthesia was too inconstant to be of any diagnostic value. In two cases, drainage had been previously employed; in both there was a reformation of stones and recurrence of symptoms. Routine fractional gastric analysis was made in twenty cases. Of these, thirteen showed a normal acid curve. The remaining seven cases showed a hypo-acidity. In no case was there a hyperacidity. Chronic appendicitis was present in thirty-four cases. In the four acute cases, the appendix was not examined. Duodenal ulcer was diagnosed and demonstrated at operation in five cases. In all these the gallbladder symptoms antedated the ulcer symptoms by several years. Gastric ulcer was found in one case.

Some Observations on Gallbladder Surgery

DR. CLAUDE P. FOX, SR., Greeneville: The indications for cholecystectomy are: (1) contracted and useless gallbladders; (2) impacted stone in cystic duct; (3) stricture of cystic duct; (4) empyema of gallbladder; (5) gangrenous gallbladder; (6) calcareous gallbladder; (7) cancer or other new growth. When statistics are finally published to show ultimate results of operations, the indications are that they will be decidedly in favor of cholecystostomy.

Surgery of Gallbladder

DR. J. A. CRISLER, Memphis: I lean to the idea of strict conservatism when I am confronted by the problem of whether to perform a cholecystectomy or a cholecystostomy. Cholecystectomy as a routine surgical procedure, without regard to the future usefulness of the gallbladder, is unwise. I have practiced antiseptic irrigation for about five years in selected cases, cases in which the muscular structure of the gallbladder was intact and the infection confined to the mucous membrane, whether they contained stones or not.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

American Journal of Ophthalmology, Chicago

April, 1921, 4, No. 4

Congenital Anomalies of Fundus of Eye. M. Danis, Brussels, Belgium. —p. 233.
Prolonged Monocular Occlusion as Test for Muscle Balance. F. W. Marlow, Syracuse, N. Y.—p. 238.
Carcinoma of Orbit; Report of Case. W. C. Finnoff, Denver.—p. 251.
Focal Adjustment in Aphakial Eye. F. P. Lewis, Buffalo.—p. 258.
Why We Accommodate. C. Loeb, Chicago.—p. 265.
Cranial Development Following Enucleation in Early Youth—Possible Effects in Adult Years. G. Dickinson, Syracuse, N. Y.—p. 270.
Blepharocchalasis with Ptosis; Report of Case. E. B. Heckel, Pittsburgh.—p. 273.
Aphakia, Near Vision with Distance Glasses. W. R. Fringer, Rockford, Ill.—p. 276.
Paralysis of Accommodation Following a Peritonsillar Abscess. J. W. White, Norfolk, Va.—p. 276.
Blindness from Methyl Alcohol Poisoning. V. R. Hurst, Longview, Texas.—p. 277.
Papillitis; Glioma of Brain. G. N. Brazeau, Milwaukee.—p. 277.

American Journal of Roentgenology, New York

April, 1921, 8, No. 4

Intralaryngeal Application of Radium for Chronic Papilloma. P. M. Hickey, Detroit.—p. 155.
*Behavior of Normal Pyloric Sphincter in Man. C. W. McClure and L. Reynolds, Boston.—p. 158.
Leather Bottle Stomach (Linitis Plastica). Five Cases; Relationship to Syphilis and Cancer of Stomach. L. T. LeWald, New York.—p. 163.
Selective Organ Stimulation by Roentgen Rays: Enzyme Mobilization. W. F. Petersen and C. C. Saelhof, Chicago.—p. 175.
Influence of Roentgen Ray Organ Stimulation on Coagulation Mechanism. C. C. Saelhof, Chicago.—p. 179.
Roentgen-Ray Burn of Third Degree Followed by Rapid Healing. E. S. Blaine, Chicago.—p. 183.
Hirschsprung's Disease. Report of Case. J. G. Ware, Santa Barbara, Calif.—p. 186.
Diagnosis of Brain Tumor by Pneumoventriculography. A. S. Merrill, Boston.—p. 188.
Foreign Body (Coin) in Bronchus for Fifteen Years. I. S. Hirsch, New York.—p. 191.
Roentgen-Ray Findings in Chronic Gas Cases. H. C. Pillsbury, Washington, D. C.—p. 193.
Practical Application of Sphere Gap to Roentgenotherapy. H. J. Ullmann, Chicago.—p. 195.
Value of Prophylactic Roentgen-Ray Treatments. S. Stern, New York. —p. 199.

Behavior of Normal Pyloric Sphincter in Man.—By means of fluoroscopy McClure and Reynolds were able to determine that finely divided carbohydrate protein or fatty foodstuffs begin to leave the normal human stomach within from three to ten minutes after their initial ingestion. Under normal conditions the human pyloric sphincter opens regularly at the approach of each antral peristaltic wave, allows chyme to pass through into the duodenum during an appreciable length of time, and closes when the antral peristaltic wave has spent itself. The introduction of fortieth, twentieth and tenth normal hydrochloric acid solutions into the first, second or third portions of the normal human duodenum either produced no effect on the opening of the pyloric sphincter as observed by means of the fluoroscope, or produced effects which were interpreted as the result of abnormal irritation of the duodenal mucosa. Neutralization of the contents of the first portion of the duodenum did not prevent the closing of the pyloric sphincter. The experimental results obtained offer evidence that acid is not the principal factor controlling opening and closing of the pyloric sphincter in man.

Archives of Dermatology and Syphilology, Chicago

May, 1921, 3, No. 5

*Etiology of Eczema; with a Preliminary Report of Experimental Studies. F. G. Harris, Chicago.—p. 579.
*Rôle of Endocrine Glands in Etiology and Treatment of Acne. L. Hollander, Pittsburgh.—p. 593.
Specificity of Cholesterinized Antigens in Serologic Diagnosis of Syphilis. R. A. Kilduffe, Pittsburgh.—p. 598.
Multiple Lymphangiomatous Tumors of Skin. E. A. Oliver, Chicago. —p. 608.
Chancre of Gum: Report of Case. J. V. Klauder, Philadelphia.—p. 615.
Susceptibility to Dermatitis from Rhus Diversiloba. J. B. McNair, Washington, D. C.—p. 625.
Acute Syphilitic Nephritis; Report of Case. J. A. Elliott and L. C. Todd, Charlotte, N. C.—p. 634.
*Curve of One Thousand Four Hundred Wassermann Reactions after Treatment by Neo-Arsphenamin and Mercury Salicylate. K. M. B. Simon, Belize, British Honduras.—p. 639.
Scheme for Presenting Subject of Inflammatory Dermatoses to Students in Terms of Fundamental Cutaneous Reaction Signs. J. H. Stokes. Rochester, Minn.—p. 641.
Further Indications for Pepsin-Hydrochloric Acid Treatment. E. H. Ahlswede, Hamburg, Germany.—p. 648.

Etiology of Eczema.—This paper was read by the late Dr. Harris in 1916 as his president's address before the Chicago Dermatological Society and was prepared for publication by Dr. John H. Stokes. Harris expresses his belief that the important factor in the production of an eczema is an increased irritability of the skin or of some structure in it, this abnormal irritability resulting in a reaction of the skin to irritants of varying degrees of intensity. Thus a skin in this state of unstable equilibrium would react to an irritant of any type, be it ever so mild. A skin in a state of normal equilibrium would require an irritant of great intensity, the reaction in this case being called an artificial dermatitis. A skin in a highly irritable state could react to a stimulant so mild as to be considered physiologic. Many facts, clinical and experimental, Harris thought substantiate this view of the etiology of eczema. It is conceded that eczema is an inflammatory reaction of the skin. The normal skin of eczema patients is especially sensitive to external irritation, be it mechanical, chemical or thermal. The sensation of itching is inherent in the epidermis, is a prominent symptom of eczema and can be prevented and counteracted by epinephrin. Inflammation of the conjunctiva and skin, usually resulting from the use of strong irritants, can be prevented by paralyzing the reflex arc in various ways, among which is the local or subcutaneous use of epinephrin. Since the vasomotor changes in eczema are so intimately associated with itching, and it has been shown that epinephrin prevents them both and is a normal constituent of the blood, it requires no great imagination to suppose that a deficiency of the active epinephrin in the blood could account for the increased sensitiveness of the skin on the one hand and the itching on the other. The epinephrin might act on the cutaneous reflex arc. The rather frequent association of eczema, low blood pressure and asthma, all conditions counteracted by epinephrin, in Harris' opinion, is suggestive, to say the least. On the other hand some toxic substance, or substances, which, entering the blood from time to time might, in spite of a normal epinephrin content, act as an irritant to the vasomotor system and especially to the cutaneous reflex arc or neutralize the normal epinephrin action at this point. The rather intimate association between eczema on the one hand and various metabolic and nervous disturbances on the other hand suggested such a possibility. The influence of diet and the gastro-intestinal tract, the action and formation of histamin, indican and antitrypsin as possible factors in the causation of eczema were also considered by Harris.

Rôle of Endocrine Glands in Acne.—In cases presenting increase in metabolic activities, Hollander prescribes, in addition to regulating the patient's habits, enforcing dietetic and hygienic measures, cleansing of the skin with hot fomations at night and frequent washings during the day, aseptic removal of comedones and opening pustules, and suprarenal gland substance, 5 grains, three times a day. In cases of the opposite type—lazy, plethoric, overnourished, closely bordering on lowered thyroid gland activity the patient is instructed to carry out the measures mentioned and he receives thyroid gland substance, one-fourth grain, three times a day. Hollander is impressed with the correctness of the conception that the underlying etiologic factor in acne is somewhere in the domain of the endocrine glands—probably in the gonads. In a good many instances the endocrine administration described is supplemented with ovarian or testicular extract administration. The administration of dry gonad extracts has proved unsuccessful.

Wassermann Reaction After Treatment.—The treatment employed by Simon consisted of at least seven weekly intravenous injections of neo-arsphenamin, beginning with a dose of 0.45 gm., and increasing it to 0.9 gm., and nine weekly injections of mercury salicylate (1 grain) in paraffin. The injection of neo-arsphenamin was omitted on the fourth and

eighth weeks of treatment; on these dates the patient received only mercury salicylate injections. There never was a case of fasting, vomiting or severe reaction while using this hyperconcentrated solution. It took from two to eleven injections to obtain a negative Wassermann reaction in primary cases; secondary cases required from seven to twenty-two. The minimum number of injections for a primary case was two, for a secondary, seven; the maximum number of injections for primary cases was fourteen, and for secondary twenty-two. Tertiary cases never gave a negative reaction while under treatment but a diminution of fixation was invariably noted.

Archives of Ophthalmology, New Rochelle, N. Y.

March, 1921, 1, No. 2

Ocular Manifestations of Epidemic Encephalitis. W. A. Holden, New York.—p. 101.
Backing Out of Cataract Operations. H. Gifford, Omaha.—p. 109.
Methods of Dealing with Capsule in Cataract Extraction. A. Knapp, New York.—p. 115.
Treatment of Cataract Patient Before and After Operation. W. H. Snyder, Toledo, Ohio.—p. 120.
Metastasis of Carcinoma into Endothelioma of Optic Sheath. M. Cohen and W. J. MacNeal, New York.—p. 128.
Ocular Manifestations of Disease of Paranasal Sinuses. J. Bordley, Jr., Baltimore.—p. 137.
Total Keratoplasty. J. W. Burke, Washington, D. C.—p. 147.
Closure of Traumatic Subconjunctival Corneoscleral Fistula. H. S. Gradle, Chicago.—p. 154.
Minor Palpebral and Conjunctival Affections Associated with Refractive and Muscular Errors. J. Green, Jr., St. Louis.—p. 158.
Ophthalmology from Viewpoint of Clinician. H. E. Smith, New York.—p. 165.

Arkansas Medical Society Journal, Little Rock

April, 1921, 17, No. 11

*Orthomelic. H. D. Wood, Fayetteville.—p. 205.
Care and Treatment of Club Feet. F. W. Carruthers, Little Rock.—p. 206.

Orthomelic.—Under this title Wood describes an apparatus designed by himself to be used as a splint in the treatment of fractures. It is in reality a modification of the Hodgen splint.

Boston Medical and Surgical Journal

April 21, 1921, 184, No. 16

Rationalé of Forcing Fluids. G. G. Smith, Boston.—p. 401.
Strangulated Hernia in Aged. Local Anesthesia. Case Reports. M. T. Field, Salem.—p. 404.
*Significant Reactions of Arterial Tension, Manifestations of Angiokinetic Energy, Clinically Observed and Interpreted. C. J. Enebuske, Boston.—p. 407.
Fecal Units and Intestinal Rate, Basis for Study of Health and Intestinal Indigestion. F. L. Burnett, Boston.—p. 415.

Arterial Tension.—The normal arterial tension, formulated in the continuously spontaneously stable vasotonus at a radialis maximum tension value exceeding 140 mm., but not exceeding 150 mm. Hg., Enebuske says may be characterized as a state of arterial tension in which the automatic and reflex excitability of the cardiovascular, neuromuscular mechanism possesses a high grade of coordination and adaptability to variable demands within wide limits, by force of which the basic radialis maximum value is balanced and retained undisturbed even though the reflex excitability is exposed to the influence of various pressor and depressor excitation. The state of arterial tension which expresses itself through a spontaneously stable radialis maximum value exceeding 140 mm. Hg, but not exceeding 150 mm., coincides with nonexistence of certain diseases, or, in other words, that this same state of arterial tension coincides with a high grade of natural immunity in relation to those certain diseases. It follows that a high grade of coordination and adaptability of the vascular automatic and reflex excitability to a wide range of variable demands resulting in a spontaneously stable vasotonus of normal radialis maximum tension value enters into the characteristics of a high degree of natural immunity.

April 28, 1921, 184, No. 17

Dental Infections and Their Relation to Disease. I. Viewpoint of Roentgenologist. F. W. O'Brien, Boston.—p. 427.
II. Viewpoint of Dentist. F. A. Keyes, Boston.—p. 430.
III. Viewpoint of Bacteriologist. P. Howe, Boston.—p. 433.
IV. Viewpoint of Oral Surgeon. E. H. Thoma, Boston.—p. 434.
Energy Content of Extra Foods. (Sandwiches). C. G. Benedict and F. G. Benedict, Boston.—p. 436.
Stem-length and Trunk-length. H. Gray and H. F. Root, Boston.—p. 439.
Impressions Concerning Etiology of Rickets Among Italians. B. T. Strongman and H. I. Bowditch, Boston.—p. 443.

Colorado Medicine, Denver

April, 1921, 18, No. 4

*Studies in Artificial Pneumothorax on Rabbit. S. Simon, Denver.—p. 69.
Impressions Gained from Use of Radium During 1920. C. B. Ingraham, Denver.—p. 72.
Intrathoracic Movements. W. W. Wasson, Denver.—p. 76.
Chemotherapy of Tuberculosis. H. Gauss, Denver.—p. 79.

Effect of Artificial Pneumothorax on Tubercles.—A large series of rabbits in which a good collapse of the right lung was initiated shortly after the intravenous injection of tubercle bacilli and maintained for a period of one month by means of the intrapleural injection of air every second or third day throughout the experimental period, revealed no appreciable effect of this procedure on the size or number of macroscopic tubercles found in the lungs of the treated animals as compared to the untreated, or in the compressed right lung as compared to the noncollapsed left lung.

Iowa State Medical Society Journal, Des Moines

April 15, 1921, 11, No. 4

Group Diagnosis and Group Therapy. L. F. Barker, Baltimore.—p. 113.
Use of Thomas Splint and Balkan Frame. C. E. Ruth, Des Moines.—p. 121.
Local Medical Societies. D. S. Fairchild, Clinton.—p. 127.
Treatment of Uterine Cervicitis. L. M. Scruby, Des Moines.—p. 139.

Journal of Laboratory and Clinical Medicine, St. Louis

April, 1921, 6, No. 7

*Bacteriology of Chronic Nontuberculous Lung Disease. H. Greeley and M. Brereton, Brooklyn.—p. 349.
Preparation of Metal Salts of Thioglycollic Acid. C. N. Myers, Washington, D. C.—p. 359.
Relation Between Blood-Coagulating and Smooth Muscle-Contracting Properties of Tissue Extracts. C. A. Mills, G. Raap and D. E. Jackson, Cincinnati.—p. 374.
*Pharmacology of Some Benzyl Esters. C. Nielsen and J. A. Higgins, Chicago.—p. 388.
Ice Water-Bath in Complement Fixation for Wassermann Reaction. A Shortened Technic. W. W. Duke, Kansas City.—p. 392.
Hemostatic Agents. H. C. Hamilton, Detroit.—p. 398.

Bacteriology of Chronic Nontuberculous Lung Diseases.—The sputum of thirty-one tuberculosis patients whose sputum was persistently negative to tubercle bacilli was examined by Greeley and Brereton both by smears and culture. They found *Penicillium glaucus*, *Mucor corymbifer* and *Aspergillus fumigatus*. Evident is adduced that such organisms are extremely numerous in such sputums and that they probably are potent in the disease process, acting alone in some cases, and in cooperation with the tubercle bacillus in a few others. As of assistance in the eventual complete identification and classification of the organisms to be found in sputum, important evidence is adduced of the extreme pleomorphism of certain fungi, probably common therein under forms morphologically representing yeasts, cocci, and bacilli.

Pharmacology of Benzyl Esters.—Using a method described by Jackson, Nielsen and Higgins have been able to obtain marked intestinal relaxation following injections of relatively small amount of benzyl benzoate and benzyl cinnamate. Benzyl cinnamate produced a greater intestinal relaxation than benzyl benzoate in equal amounts. Benzyl cinnamate lowers the blood pressure less than benzyl benzoate. Benzyl cinnamate is a solid compound at ordinary temperature but readily melts at body temperature. Similar to benzyl benzoate it is virtually nontoxic when administered orally. Another feature noted by the authors is that, after repeated injections of large doses of benzyl esters into the blood stream, the arterial blood becomes very venous in appearance. There is no difference in the coagulation period of such blood as compared with normal arterial blood from the same animal.

Journal of Nervous and Mental Diseases, New York

April, 1921, 53, No. 4

Influenza and Melancholia. K. A. Menninger, Topeka, Kan.—p. 257.
*Reduction of Nervous Irritability and Excitement by Progressive Relaxation. E. Jacobson, Chicago.—p. 282.

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Reduction of Nervous Irritability and Excitement by Progressive Relaxation.—Jacobson's method consists of voluntary continued reduction of contraction or tonus of muscle groups and the motor or associated portions of the nervous system. The relaxation is progressive. For instance, the patient relaxes a group, the biceps-brachial of the right arm further and further each minute; he learns consecutively to relax the upper muscle groups of his body. With each new group he simultaneously relaxes such parts as have previously received practice. From day to day he progresses toward the habit of repose, tending toward a state in which quiet is automatically maintained.

Journal of Orthopaedic Surgery, Lincoln, Neb.

April, 1921, 3, No. 4

Nonoperative Treatment of Scoliosis. W. Truslow, Brooklyn.—p. 121.
Chronic Circumscribed Osteomyelitis. W. G. Stern, Cleveland.—p. 132.
Osteomyelitis Following War Injuries. R. Stephens, New York.—p. 138.
*Protractor for Measuring Rotation of Joints. W. A. Clark, Pasadena, Calif.—p. 154.
*Giant-Cell Tumor in Knee Joint: Report of Case. P. Blanco.—p. 156.

Protractor for Measuring Joint Rotation.—The instrument used by Clark is a half circle cut out of zinc, aluminum or other rigid material, marked with the degrees of the half circle arc from 0 to 180 degrees and mounted on two upright pieces so that it is vertically adjustable. It is made large enough to go over the knee which is the largest part it is required to arch over. By means of the vertical adjustment it is set at the desired height above the flat surface on which the limb rests so that the diameter from 0 to 180 degrees passes at right angles through the axis of rotation. The zero end of the arc is placed toward the median body line so that inward rotation is always toward 0 and outward rotation toward 180. In stating the amount of rotation it is not necessary to specify internal or external but merely to state the two limits, e. g., rotation from 40 to 160 degrees. The reading is taken by sighting along the radiating lines on the wide surface of the protractor, the observer's head being placed so that the eye comes almost in the same plane as the protractor and at sufficient distance to lend perspective. By moving the head a radiating line will be found which coincides with the plane of the rotated limb. For the forearm this plane is that which passes through the radial and ulnar styloids. For all other parts it is the anteroposterior plane.

Tumor in Knee Joint.—The tumor in the case cited by Blanco was lying in the capsule of the joint and was intimately associated with the infrapatellar pad. An area of discoloration in the tumor suggested the presence of a fairly recent hemorrhage. Microscopic study of the tissue revealed giant-cell tumor of the xanthic type. The patient's convalescence was uneventful.

Journal of Pharmacology and Experimental Therapeutics, Baltimore

April, 1921, 17, No. 3

Influence of Sedatives on Animals. I. Method for Measuring Influence of Stimulating Drugs and of Sedatives on Activity of Animals (Activitymeter). W. S. Van Leeuwen, Leiden.—p. 169.
*Duration of Constriction of Blood Vessels by Epinephrin. S. J. Meltzer and J. Auer, New York.—p. 177.
Chronic Intoxications on Albino Rats. IV. Fluorid, Chlorid and Calcium (Including Sodium Fluorid, Sodium Chlorid, "Phosphate Rock," Calcium Phosphate (Precipitated) and Calcium Carbonate (Precipitated). T. Sollmann, O. H. Schettler and N. C. Wetzel, Cleveland.—p. 197.
*Action of Drugs on Output of Epinephrin from Suprarenals. VII. Physostigmin. G. N. Stewart and J. M. Rogoff, Cleveland.—p. 227.
Effect of Ipecac in Treatment of Infectious Enterohepatitis (Blackhead) in Turkeys. H. M. Wegeforth and P. Wegeforth, San Diego.—p. 249.

Constriction of Blood Vessels by Epinephrin.—The experiments reported on by Meltzer and Auer showed conclusively that a subcutaneous injection of epinephrin in the ear of rabbits causes a constriction of all the vessels of that ear. The constriction is quite intense; but the outstanding feature is its very considerable duration—from three to eight hours. The rise of blood pressure from an intravascular injection of epinephrin is at the utmost seven minutes. The latent period which passes between the time of the injection and the onset of the constriction is the longer the further away the injection is made from the central artery. When the constriction passes off the blood vessels which were subjected to this effect show later a tendency to the opposite effect, to vasodilatation.

Effect of Physostigmin on Output of Epinephrin.—After the administration of physostigmin, either intravenously or subcutaneously, in cats, the epinephrin output of the suprarenals was found by Stewart and Rogoff to be augmented (to as much as from ten to fifteen times the initial output). The stage of augmentation is prolonged and is preceded by a transient diminution. No evidence was obtained that after section of the splanchnics and other nerves going to the adrenals, physostigmin can increase the epinephrin output by peripheral action.

Journal of Urology, Baltimore

February, 1921, 5, No. 2

*Testes and Certain Vasomotor Reactions of Penis. A. C. Crawford and J. M. George, Philadelphia.—p. 89.
*Giant Vesical Calculus. A. Randall, Philadelphia.—p. 119.
*Clinical Investigation of Phenolsulphonephthalein Test. W. F. Braasch and E. C. Kendall, Rochester, Minn.—p. 127.

Testes and Vasomotor Reactions of Penis.—The experimental work done by Crawford and George showed that there seems to be in the testes a specific dilator for the penis. Agents which dilate the blood vessels of the hind limb increase to some extent the volume of the penis.

Largest Vesical Calculus.—Randall claims that his case represents the largest vesical calculus authentically reported to have been found antemortem and in all probably the largest in medical literature. The patient was 61. Twelve years ago, the patient passed by urethra three very small calculi. This was followed by frequency of urination, a symptom that has persisted with but slight variation. He noticed that urine on standing would form a crystalline deposit on the vessel wall. Hematuria was noticed several years ago but none recently. In July, 1919, the patient discontinued his work because of his suffering from hemorrhoids and his inability to properly support an inguinal hernia. He was likewise losing strength. On examining the abdomen, a hard tumor was found extending from the symphysis pubes almost to the umbilicus. It was fixed solidly in place and perfectly immovable, apparently a part of, or firmly attached to, the pelvis. On passing a silver catheter no obstruction was found in the urethra and it entered without difficulty a short distance into the bladder. About 1½ ounces of clear urine were withdrawn, examination of which showed no albumin, no sugar and no microscopic evidence of blood. On entering the bladder, the catheter grated on a hard surface which was believed to be a calculus. Roentgenologic examination showed an immense shadow filling the entire true pelvis and extending three finger breadths above the line of the sacral promontory. The bladder was opened. A calculus weighing in its moist state exactly 64 ounces, or 4 pounds, was removed. Its longitudinal circumference measured 48 cm., and its greatest horizontal circumference (that above the brim of the pelvis) 40 cm. The mark of the superior straight was very evident, while the portion opposed to the symphysis had formed an overlapping ledge and was quite ebonized. Posteriorly could be seen the imprint of the outline of the sacrum, grooved on the left by a shallow depression showing the course of the rectum. Below on the right was a teatlike projection under which in pulley-like fashion could be seen the curve of the course of the right ureter. The surface was generally quite smooth, of dark brown color and in spots appearing polished. Where this surface had cracked off there was exposed the soft white, granular material characteristic of calcium phosphate deposit. On the portion under the projecting ledge that was approximated to the symphysis the surface was of especially high polish resembling ebonized bone. The calculus was not sectioned.

Acidosis and Phenolsulphonephthalein Test.—The extent to which phenolsulphonephthalein is retained in the tissues Braasch and Kendall state is influenced by the degree of acidosis. If rendered alkaline the tissues will readily liberate it. Following alkalization of the urine the phenolsulphonephthalein output with intramuscular injection is apparently higher. With nephritis alkalization of the urine has but little

effect on the output. In the presence of cardiac insufficiency accurate estimation of the renal function is obtained best by intravenous injection. The difference between the intramuscular and intravenous output offers a fair index of the comparative degree of cardiac and renal impairment.

Kansas Medical Society Journal, Topeka

April, 1921, 22, No. 4

Transfusion. P. M. Krell, Kansas City.—p. 113.
What Not to Do in Bone Surgery. H. L. Rogler, Kansas City.—p. 117.
Gallbladder Diseases. H. L. Snyder and H. H. Jones, Winfield.—p. 118.
Law for the Doctor. L. Childs.—p. 121.

Maine Medical Association Journal, Portland

April, 1921, 12, No. 9

Oral Infection. H. D. Smith, Portland.—p. 273.
Cancer Problem. E. H. Risley.—p. 284.

Medical Record, New York

April 30, 1921, 99, No. 18

Specialization in Medical and Surgical Treatment of Ulcers of Stomach and Duodenum. A. L. Soresi, New York.—p. 727.
*Technic of Intramuscular (Epifascial) Injection. J. H. Stokes, Rochester, Minn.—p. 730.
Backache: Low Back Pain of Mild Type. S. Epstein, New York.—p. 734.
*Case of Syphilitic Dactylitis, with Roentgen-Ray Findings. J. Seilin, Chicago.—p. 736.
*Physical Therapeutics in New York Hospitals. A. B. Hirsh, New York.—p. 737.
How May We Reduce Mortality in Appendicitis? M. Kahn, Los Angeles.—p. 741.
Concept of Roentgen-Ray Pathology. XII. Gastropathy. A. J. Pacini, Washington, D. C.—p. 742.
*Treatment of Incoercible Vomiting of Pregnancy. G. G. Van Schaick, New York.—p. 746.

Technic of Epifascial Injection.—In order to obtain better absorption and freedom from local irritation even on the injection into the buttock of a highly irritating drug, Stokes follows a certain technic. The patient lies prone on a table. Relaxation should be complete. The patient should drop his arms over the side of the table. His legs should be placed in a position of moderate internal rotation "toed in." Injections into the buttock should, in general, be given into the upper outer quadrant near its inner angle. If the injection is given into the upper part of the outer quadrant or into the inner quadrant near the sacrum, even a short needle is likely to strike bone, or the injection of the irritant substance above the periosteum or about the roots of the sacral plexus will give rise to induration and pain, and may induce an obstinate sciatica. Injections given into either of the lower quadrants are subject to pressure on sitting, and are correspondingly painful. If administered near the great sciatic nerve a neuritis may result. Such injections, moreover, cannot be deposited on the fascia with the exactitude possible in the upper outer quadrant, and for this reason are likely to give rise either to superficial nodule formation, abscesses, or deep firm indurations. The left hand is placed flat on the buttock and with moderate pressure is drawn firmly downward toward the patient's heel, thus flattening and fixing the tissues. The syringe is introduced to its full length by a quick stroke at an angle of approximately 20 degrees from the vertical in a stagittal plane, with a slight inclination inward. The removal of the left hand slightly increases the slant of the syringe. It is not necessary in this technic to use a sign, such as Wechselmann's torsion sign, for demonstrating that the needle point is near or on the fascia. The site of the injection, the length of the needle when properly adapted to the type of buttock, the fixation of the tissue with the left hand, and the position of the syringe when introduced soon become matters of habit and seem to place the injected material in such a way that induration is a very unusual occurrence.

Syphilitic Dactylitis.—A woman complained of pain and swelling in the right thumb of about a week's standing. She admitted the possibility of venereal infection. She also had had nocturnal headaches, tibial bone pains, and shortness of breath, with oppressive sensations beneath the sternum on exertion. The roentgenogram showed a proliferative periostitis on the volar aspect of the interphalangeal joint. The bony nodules seemed to be deposited in the synovial sheaths and tendons besides the periosteum itself. She was put on ascending doses of potassium iodid and mercury protiodid by mouth. The pain and tenderness disappeared in about five days, and the swelling gradually went away in the course of a month.

Physical Therapeutics.—The chief obstacle now preventing a more rapid spread of knowledge on physiotherapy here Hirsch says is the insufficient number of teaching courses available, either for the undergraduate or the full-fledged practitioner. Abroad, in addition to the lectureship at Oxford, professorships of physical therapeutics have been founded in the Universities of Ghent, Bordeaux and Madrid. In Canada courses on the subject are given at Hart House, Toronto, and at McGill University. In the United States, instruction is given in physical methods in Boston at City Hospital, at Harvard and at the Children's Hospital; and similar courses are given to New York undergraduates at the Montefiore Home; also, at the Jefferson and the university medical schools in Philadelphia. It is announced that physiotherapy is to be regularly included in the medical curriculum at the University of Ipdiana. Hirsch urges that undergraduate instruction on the subject must soon be included in the curriculum of all medical schools. Postgraduate courses, now given only by private individuals, should become part of the work of hospitals everywhere. Hospitals lacking physical treatment facilities, in charge of full-time medical directors, fail to give proper service to patients and can no longer be considered as modern. Active propaganda may be needed to make medical staffs and directorates in general realize the urgent need for introducing these indispensable measures.

Treatment of Intractable Vomiting of Pregnancy.—Colonic washings and proctoclysis were the measures employed successfully by Van Schaick in the treatment of several cases of intractable vomiting of pregnancy.

Mental Hygiene, Albany, N. Y.

April, 1921, 5, No. 2

Malbehavior Viewed as an Outpatient Mental and Nervous Clinic Problem. F. A. Strecker, Philadelphia.—p. 225.
Psychiatry and "Scientific Psychology." J. T. MacCurdy, New York.—p. 239.
Case of Emotional Crisis. A Description and Analysis of an Episode that Occurred Among Psychopathic Women. E. R. Spaulding, New York.—p. 266.
Mental Hygiene and College Student. F. E. Williams.—p. 283.
Experiment to Determine Possibilities of Subnormal Girls in Factory Work. E. B. Bigelow, New Haven, Conn.—p. 302.
Vocational Probation for Subnormal Youth. A. Gesell, New Haven, Conn.—p. 321.
Maladjusted Children. L. Blumgart, New York.—p. 327.
Possibilities of State Society for Mental Hygiene. H. D. Singer, Springfield, Ill.—p. 342.
Mental Diseases in Twelve States, 1919. H. M. Pollock and E. M. Furbush, New York.—p. 353.

Military Surgeon, Washington, D. C.

April, 1921, 48, No. 4

Physical Examination with Special Reference to Chest and to Military Practice. A. L. Benedict, Buffalo.—p. 373.
Food at Front Lines. C. C. Mason and A. T. Shohl, Baltimore.—p. 386.
Typhoid Fevers and Paratyphoids. A. Martinet.—p. 402.
Acute Empyema. E. F. Butler and A. D. Haverstock, M. C., U. S. Army.—p. 412.
Report of New Type of Helmet. S. H. Wadhams, M. C., U. S. Army.—p. 424.
Etiology of Ocular Wounds Caused by War Projectiles. V. Morax and F. Moreau.—p. 424.
Notes, Experiences and Suggestions on Automobile Ambulance Service of a Modern Army in Field. S. Thora.—p. 431.
Being a Military Observer. J. R. Church, M. C., U. S. Army.—p. 469.

National Research Council Bulletin, Washington, D. C.

February, 1921, 1, No. 8

Intellectual and Educational Status of Medical Profession as Represented in U. S. Army. M. V. Cobb and R. M. Yerkes.—p. 457.

New Jersey Medical Society Journal, Orange

April, 1921, 18, No. 4

Neurologic Manifestations of Puberty. A. Gordon, Philadelphia.—p. 111.
Twenty-Nine Years of Obstetrical Practice. J. L. Lund, Perth Amboy.—p. 112.
End Results of 442 Fractures Caused by Industrial Accidents. J. H. Bunin, Newark.—p. 115.
Protest Against Thoughtless Radicalism in Surgery of Nose, Throat and Mouth. H. A. Kane, Bayonne.—p. 117.
Nine Cases of Foreign Bodies in Upper Air and Food Passages. H. B. Orton, Newark.—p. 118.

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New Orleans Medical and Surgical Journal

May, 1921, 73, No. 11

Specific and Nonspecific Immunities. G. H. Sherman, Detroit.—p. 461.
Patulous Appendix—Toxic Focus. W. A. Love, New Orleans.—p. 464.
*Two Cases of Leprosy in New Orleans. J. M. Perret, New Orleans. —p. 473.
Mercurosal. J. L. Marchand, New Orleans.—p. 476.

Leprosy in New Orleans.—The two patients whose cases are reported by Perret were native Louisianians, who had never left the United States. One had never been outside of Louisiana. In both cases smears made from the nasal secretions showed the bacilli of leprosy.

New York Medical Journal

April 20, 1921, 113, No. 12

Modern Commentaries on Hippocrates. J. Wright, Pleasantville, N. Y. —p. 569.
Albumin, Lymphocytic Cells and Tubercle Bacilli in Sputum. K. Taheuchi, Tokyo, Japan.—p. 574.
*General Postdiphtheritic Paralysis in an Adult. D. H. Hallock, Southampton, N. Y.—p. 577.
*Preliminary Report on Immunity of Bovine Udder to Carcinoma. D. C. A. Butts, Philadelphia.—p. 578.
Colonel Henry Smith. C. B. Meding, New York.—p. 582.
Two Cases of Concretion of Lacrymal Canaliculus. E. A. Shumway, Philadelphia.—p. 584.
Case of Gaucher's Disease. L. H. Levy, New Haven, Conn.—p. 586.
Case of Splenomegaly (Gaucher's Disease?). H. B. Mills, E. J. Asnis and W. W. Babcock, Philadelphia.—p. 589.
Review of Carbohydrate Metabolism as Related to Diabetes. F. P. Knowlton, Syracuse.—p. 591.
Endocrinology and Its Practical Application. D. M. Kaplan, New York.—p. 593.
Biologic or More Inclusive Sense of Therapy. J. J. McNulty, New York.—p. 602.
Retropharyngeal Abscess; Report of Sixty Cases. J. Friedman and S. D. Greenfield, Brooklyn.—p. 604.
Who is Responsible for Sponge Count? J. W. Kennedy, Philadelphia. —p. 607.
Educational Campaign Against Tuberculosis in Pennsylvania. A. M. Deven, Philadelphia.—p. 608.
Fractures. H. B. Pritchard, Syracuse.—p. 610.

Postdiphtheritic Paralysis.—The first sequel to appear in Hallock's case occurring in a man, aged 50, did so promptly, and consisted of a paralysis of the pharyngeal muscles which persisted for a week. Weight and strength gradually returned and in one month the patient was able to do light work about the farm. Three months after the acute illness it was first noticed that the wrists and ankles were becoming weak. This weakness gradually involved the arms and legs until the patient was again rendered helpless, being unable to help himself in any way. There was a complete loss of use of the flexor and extensor muscles of the fingers and toes, wrists and ankles, with partial loss of voluntary motion at the elbows and knees. All of the muscles moving the shoulders and hips functioned, but weakly. There was a beginning atrophy of the muscles most extensively involved, especially the dorsal interossei of the hands. The abdominal muscles of the left side were flaccid and could not voluntarily be tightened, while those of the right side were definitely weakened. The anal sphincter functioned normally, while the vesical sphincter was slightly involved. All tendon reflexes usually elicited from the extremities were unobtainable, even by reinforcement. The left abdominal reflex was absent; the right, weak. The cremasteric was present bilaterally. Neither a positive nor a negative Babinski was obtained. Three nose and throat cultures and smears at three day intervals were ngative for the diphtheria bacillus. Strychnin was at once started by hypodermic injection and continued to beginning toxicity and maintained just below the danger point. Massage and passive motion were employed daily. No diphtheria antitoxin was administered at any time. In ten days the patient was able to sit up in bed and make coarse movements of the arms and legs, but the hands and feet were useless. Sixteen days from admission, the patient was first able to grasp a fork in his hand and bear weight on his feet without toppling over. On the twenty-third day symptoms of strychnin poisoning appeared. On the twenty-ninth day crutches were used for the first time. On the thirty-fourth day the patient first walked without crutches. Five months after admission the patient was in excellent condition.

Immunity of Bovine Udder to Carcinoma.—The evidence collected by Butts leads to the conclusion that carcinoma of the bovine udder has not been demonstrated. Hence the bovine udder is immune to carcinoma. Butts suggests that certain udder cells, udder fluids other than the external secretion (milk), the milk or some one or more of its constituents, a ferment, a selective lysin, or an internal secretion, furnished by certain portions of the stroma of the gland, or conveyed to the udder from a gland of internal secretion situated elsewhere, may determine this freedom from carcinoma.

New York State Journal of Medicine, New York

April, 1921, 21, No. 4

Use of Bronchoscope in Diagnosis of Tumors of Mediastinum. J. D. Kernan, Jr., New York.—p. 115.
Treatment of Intranasal Suppuration. E. R. Faulkner, New York.—p. 118.
Effect of Intranasal Conditions on Ocular Muscles. E. S. Ingersoll, Rochester.—p. 121.
Chronic Tonsillar Infection. T. A. Rogers, Plattsburg.—p. 124.
Case of Cerebral Abscess. J. E. Gage, Utica.—p. 127.
Laceration of Cervix Uteri: What Does It Mean to Patient, to Obstetrician, and to Gynecologist? J. R. Gaffe, New York.—p. 129.
Features of Gallbladder Surgery of Interest to Obstetrician and Gynecologist. W. D. Johnson, Batavia.—p. 131.
Pyelitis. H. D. Furniss, New York.—p. 132.
Social Pediatrics. H. L. K. Shaw, Albany.—p. 133.
Sugar. F. Van Der Bogert, Schenectady.—p. 135.
"Colic" in Nursing Infant. T. W. Clarke, Utica.—p. 138.

Northwest Medicine, Seattle

April, 1921, 20, No. 4

Tuberculosis of Skin in Some of Its General Medical Aspects. J. H. Stokes, Rochester, Minn.—p. 79.
Anaphylaxis in Asthma and Hay-Fever. M. Bisaillon and R. W. Matson, Portland, Ore.—p. 84.
*Simple Drainage Device for Empyema. A. A. Matthews, Spokane, Wash.—p. 88.
*Active Immunization Against Diphtheria. H. Jeidell, Salt Lake City. —p. 89.
Growth of Laboratory of Washington State Board of Health. M. E. Larkin, Seattle, Wash.—p. 93.

New Drainage Device for Empyema.—Matthews uses the Wilson empyema drainage tube but inserts in its lumen another tube which fits very snugly (air tight), and passes it through flush with the inner opening. Then it is secured by a couple of interrupted sutures leaving the distal end from 8 to 10 inches long.

Active Immunization Against Diphtheria.—The clinical reactions following the Schick test were noted by Jeidell in about 165 cases, and he observed the direct effects of treatment with toxin-antitoxin in about seventy-five cases. Local reactions and constitutional disturbances were noted in a few of the older children, but these were not alarming and passed off in from twenty-four to thirty-six hours. Jeidell believes that the public should be enlightened as to the value of the treatment with toxin-antitoxin for the prevention of diphtheria.

Ohio State Medical Journal, Columbus

April 1, 1921, 17, No. 3

Heart Failure and Tobacco as an Etiologic Factor. R. O. Brigham, Ann Arbor, Mich.—p. 226.
Anesthesia in Obstetrics. A. H. Bill, Cleveland.—p. 228.
What Can General Practitioner Do for the Eyes? C. A. Tyler, Alden, N. Y.—p. 231.
Is Strychnin Sulphate a Specific in Treatment of Tetanus? T. J. Savage, Xenia.—p. 233.
Malnutrition Among School Children: Its Causes, Effects and Methods of Correction. C. P. Knight, Washington, D. C.—p. 235.
Problem of Gastroptosis. W. C. Stoner, Cleveland.—p. 237.
Enlargement of Prostate. M. L. Pratt and R. B. Pratt, Bellfontaine, —p. 239.
Antidiuretic Effect of Pituitary Extract in Diabetes Insipidus: Report of a Case. G. Micklethwaite, Portsmouth.—p. 245.

Physiological Reviews, Baltimore

April, 1921, 1, No. 2

Blood Volume and Its Regulation. J. Erlanger, St. Louis.—p. 177.
Sugar of Blood. J. J. R. Macleod, Toronto.—p. 208.
Regulation of Pulmonary Circulation. C. J. Wiggers, Cleveland.—p. 239.
Contributions of War to Physiology of Nervous System. G. Horrax, Boston.—p. 269.
Heat-Regulating Mechanism of Body. H. G. Barbour, New Haven, Conn.—p. 295.

Tennessee State Medical Ass'n Journal, Nashville

March, 1921, 13, No. 11

Congenital Pyloric Stenosis. R. A. Barr, Nashville.—p. 403.
Blood Transfusion in Thirty-Nine Cases by Citrate Method. C. R. Crutchfield, Nashville.—p. 408.
Auricular Fibrillation. J. O. Manier, Nashville.—p. 416.
Gynecologic Cervix. G. F. Douglas, Birmingham, Ala.—p. 420.

Texas State Journal of Medicine, Fort Worth

April, 1921, 16, No. 12

Importance of Removing Supraclavicular Glands in Cases of Cancer of Breast. J. E. Thompson, Galveston.—p. 524.
Use of Radium in Gynecology. G. H. Lee, Galveston.—p. 530.
Use of Radium in Epithelioma of Lateral Wall of Nose. E. H. Cary, Dallas.—p. 536.
Cancer of Uterus. J. E. Gilcreest, Ennis.—p. 539.
Tumors of Urinary Bladder. K. D. Lynch, El Paso.—p. 541.
Surgical Treatment of Toxic Goiter. J. A. Hill, Houston.—p. 544.

Virginia Medical Monthly, Richmond

April, 1921, 48, No. 1

Care of Patients Manifesting High Blood Pressure. L. F. Barker, Baltimore.—p. 1.
Extraction of Teeth; Study and Protest. J. W. Hunter, Jr., Norfolk. —p. 7.
Epidemic Encephalitis. W. B. Martin, Norfolk.—p. 13.
Syphilis of Cardiovascular System. L. F. Cosby, Abingdon.—p. 20.
Treatment of Inoperable Carcinoma of Uterus with Radium. S. W. Budd, Richmond.—p. 22.
*Pituitary Headache. F. H. Redwood, Norfolk.—p. 25.
Artificial Feeding of Infants. W. Rivers, Lynchburg.—p. 27.
Few Fundamental Facts. C. Thompson, Jacksonville, N. C.—p. 31.
Incidence of Congenital Syphilis. L. T. Royster, Norfolk.—p. 35.
Care and Treatment of Pneumonia. F. C. Bimber, Norfolk.—p. 36.
Value of Necropsies; Report of Cases. K. D. Graves, Roanoke.—p. 39.

Pituitary Headache.—Redwood has seen eleven patients whose sole or chief complaint was headache of pituitary origin. All cases showing positive Wassermann reactions, urinary findings indicating nephritis, and reflex cases, such as pelvic disease in women, have been eliminated. All cases with any associated disease that could possibly have a bearing on the headache are not included. Some of these patients had other complaints, for instance, convulsive attacks or diabetes insipidus, but all of them had headache. Seven had very small sellas, closed in by the clinoids, and four had sellas normal in size but the clinoids enclosed the fossa. Six had headache every day, three every two or three days, and two once a month. One patient had been troubled with headache since he could remember; the other patients from six months to seven years. In eight cases the headache disappeared entirely or has been greatly relieved; two cases of long standing have not been benefited in the slightest, and one patient has not been heard from in several months. The treatment consisted of the administration of pituitary extract.

West Virginia Medical Journal, Huntington

April, 1921, 18, No. 10

Treatment of Rectal Diseases. R. J. Wilkinson and J. M. Emmett, Huntington.—p. 361.
Tuberculosis in Children. V. L. Wetherby, Welch.—p. 363.
Purpura Hemorrhagica. J. L. Miller, Thomas.—p. 365.
Hernias of Urinary Bladder. A. P. Heinecke, Chicago.—p. 374.

Wisconsin Medical Journal, Milwaukee

April, 1921, 19, No. 11

*Incidence of Goiter in Wisconsin with Suggestions as to Medical Management. R. C. Blankinship, Madison, Wis.—p. 561.
Cholecystectomy vs. Cholecystostomy. C. J. Combs, Oshkosh, Wis.—p. 565.
Special Points in Surgery of Gallbladder and Ducts. G. W. Crile, Cleveland.—p. 568.
Need of Maternity Service in Rural Districts. C. M. Schuldt, Platteville, Wis.—p. 574.
Dental Conditions Relative to Systemic Findings. C. R. Modie, Madison, Wis.—p. 577.
Recent Experiments in Secondary Nursing Service. B. K. White, Milwaukee, Wis.—p. 579.

Incidence of Goiter in Wisconsin.—In the examination of 13,706 entering students at the University of Wisconsin, simple unclassified thyroid enlargement was found in 28 per cent. and exophthalmic goiter in 6 per cent. The proportion of males to females was approximately 1 to 2 in both simple and exophthalmic goiter. Blankenship believes that this is a fair index of the incidence of goiter in Wisconsin.

American Journal of Insanity, Baltimore

April, 1921, 77, No. 4

State Hospital Training School for Psychiatric Nursing. D. A. Laird, Iowa City.—p. 477.
Undiagnosed Cases, Chicago State Hospital, 1919. C. F. Read, Chicago. —p. 493.
Tertiary Syphilitic Psychoses Other than Paresis. B. P. Thom, New York.—p. 503.
Problem of Psychopathic Child. H. H. Goddard, Columbus, Ohio.—p. 511.
Plots in Psychiatry. D. Gregg, Wellesley, Mass.—p. 517.
Compensatory Mechanism of Delusions and Hallucinations. S. A. Silk, Washington, D. C.—p. 523.
Reaction in Dementia Praecox to Vagotonic and Sympathicotonic Criteria. T. Raphael, Ann Arbor, Mich.—p. 543.
Comparison of Manic-Depressive and Dementia Praecox Cases by Free-Association Method. G. Murphy.—p. 545.
*Analysis of More Than Two Hundred Cases of Epilepsy Treated with Luminal. C. C. Kirk.—p. 559.
Malingering and Simulation of Disease in Warfare. T. A. Williams, Washington, D. C.—p. 567.

Luminal in Epilepsy.—The method of treatment employed by Kirk consisted of the administration of 1½ grains of luminal at bedtime. Luminal sodium seemed to be as effective as luminal. There was immediate decrease in the number of seizures, a decrease in the severity of the seizures, many of them changing from grand mal to petit mal, decrease in the severity of furore and a shortening of the time of confused states, an improvement of the mental and physical health of all patients, fewer number of accidents, a general improvement of the moral tone of the wards, and a complete cessation of the seizures in a large number of cases. No deleterious effects were observed. In certain cases the drug is effective in from twenty-four to forty-eight hours, in others not until a week or more has passed.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Single case reports and trials of new drugs are usually omitted.

British Medical Journal, London

April 16, 1921, 1, No. 3146

Nature of Flutter and Fibrillation of Auricle. T. Lewis.—p. 551.
*Carcinoma of Large Intestine. J. L. Stretton.—p. 555.
Gunshot Injury to Brain Involving Both Cortical and Subcortical Tissue. J. S. Bury.—p. 556.
*Surgical Treatment of Chronic Sciatica. J. M. Renton.—p. 557.
*Survival After Operation for Annular Malignant Disease of Large Bowel. J. D. Malcolm.—p. 559.
Hospital Treatment of Fractures: Suggestion for Centralization. R. Ollerenshaw.—p. 559.
Notes on a Giant. W. Robinson.—p. 560.
Involvement of Orbit in Disease of Nasal Accessory Sinuses. R. E. Wright.—p. 561.
Isolation of Diphtheria Bacilli. D. R. Wood.—p. 562.
Prevention of Intestinal Obstruction After Ventrofixation. A. Don. —p. 563.
Amebic Dysentery Complicating Malignant Disease of Lower Bowel. J. Hoskin.—p. 563.

Carcinoma of Large Intestine.—The treatment Stretton advocates for these cases is to operate early and freely. If there is a chance to perform a radical operation for the complete removal of the growth, do so. It may not be wise to do it all at one sitting. This must depend on the case. The excision should be a free one. At least 4 inches of healthy bowel on each side of the growth, together with the mesentery and lymph glands, should be removed and then an end-to-end anastomosis is made as it is the nearest approach to Nature's arrangement. Stretton prefers simple suture to any mechanical appliances, and he uses linen thread. Five cases of carcinoma of the large intestine are cited.

Surgical Treatment of Chronic Sciatica.—Renton is convinced that in a considerable proportion of these cases a rapid and complete recovery can be obtained by operation. If the correct type of case is selected and the operation of nerve-freeing performed, a cure can be obtained in practically every instance. It is only in chronic cases of sciatica that have failed to recover under medical treatment that there is any question of surgical interference. Further, not all of those chronic cases are suitable for operation, so that it is necessary to differentiate them carefully by the symptoms to which they give rise. Renton classifies them into three groups: 1. Cases in which the patient is quite free from pain while at rest but begins to have pain on exercise or on assuming some special position. 2. Cases in which there is a certain amount of pain while at rest, but where it becomes really intense on exercise or on the assumption of a particular position. 3. Cases in which the pain is of an indefinite character, present at rest off and on, and sometimes improving to a certain extent on exercise. The nerve is exposed below the gluteus maximus by a 4 to 5 inch longitudinal incision, and then carefully remove all adhesions from the sacrosciatic notch to about the middle of the thigh. All tags and loose ends of adhesions

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should be dissected away. The nerve is then dropped back into the wound and the skin sutured. No splint is applied, but the patient is kept in bed for ten days and then allowed up.

Survival After Operation for Annular Malignant Disease of Intestine.—In one case cited by Malcolm, the patient being a male, aged 78, an annular constriction of the transverse colon near the splenic flexure necessitated the performance of a lateral fistula in the presenting portion of the enormously dilated ascending colon. Further treatment was considered unwise at that time. The patient bore the operation well, and recovered satisfactorily. From the first he was subject to attacks due to accumulations in the transverse colon which were accompanied by pain, discomfort and high temperature, until an offensive discharge took place through the fistula. After about four years these attacks began to be associated with escapes of irritating matter, mainly mucus, through the anus, by which small quantities of feces were passed at intervals to the last. Between the attacks the patient was wonderfully well and able to go out. The patient died from metastasis more than seven and a half years after the operation.

Indian Medical Gazette, Calcutta

March, 1921, 56, No. 3

Cause of Dysentery. L. Cook.—p. 81.
Transfusion of Blood. J. W. Porter.—p. 83.
Malaria. Part II. S. D. S. Greval.—p. 85.
*Wassermann Survey of Inmates of Ranchi European Lunatic Asylum. O. Berkeley-Hill.—p. 89.
*Autohemic or Autoserum Therapy. D. N. Sen.—p. 94.
Uses of Sodium Cacodylate. S. Mallannah.—p. 96.
Incidence of Gingivitis Among Indian Troops. R. C. Watts and S. G. Mohamed.—p. 97.
Plague at Pyawbwe (Upper Burma). N. S. Pillai.—p. 98.
Cure of Hernia by Vaccine. S. Mallannah.—p. 99.
*Strange Migration of Round Worm. T. M. Pillay.—p. 100.
Curious Case of Ascites. H. C. Gupta.—p. 100.

Wassermann Reaction in Insane.—The entire population of the Ranchi European Lunatic Asylum, which is fairly representative of the "middle" or "lower-middle" class European and Eurasian population of Northern, Central and Eastern India, has been examined by Hill by the Wassermann syphilis reaction, 186 individuals being tested. None of these were general paretics. Of the total number, seventy-three reacted positively, on which basis there is a percentage of latent syphilis amounting to 39.24 among the total population of the asylum. Hammond, in his survey of the New Jersey State Hospital, in which he examined 1,583 individuals, found that on excluding cases of general paralysis the percentage of latent syphilis in the total hospital population was only 2.7. It is believed that the enormous difference between the percentage of syphilitics in the Ranchi Asylum and in the New Jersey State Hospital can be explained as being due to (1) the comparatively few cases examined, (2) that the cases examined had never received any anti-syphilitic treatment since admission to the asylum, (3) that they were all drawn from an urban population as opposed to the rural population which supplies the cases to the New Jersey State Hospital, (4) that the middle class Europeans and Eurasians in the towns of Northern, Central and Eastern India are as a community very heavily infected with syphilis, a view that finds considerable support from the huge percentage of unmarried women belonging to the community who are found to be suffering from syphilis.

Autohemic Therapy.—In cases of autohemic treatment a few drops of blood are drawn from a vein of a patient and added to some sterilized distilled water. This is then subjected to certain laboratory processes by which a solution containing the products derived from the splitting up of the highly specialized constituents of the blood is obtained. Ten or twenty drops of this serum or solution thus prepared are injected under the skin or into a vein of the patient, which stimulates cell metabolism to a very high degree. The treatment appears to have had beneficial results on several otherwise intractable cases.

Strange Migration of Roundworm.—The course taken by the worm in Pillay's case would appear to be similar to that of an oblique inguinal hernia. After penetrating the intestinal wall and peritoneum, it pierced the various tissues that usually form the coverings of such a hernia, forming a soft fluctuating swelling at the upper part of the scrotum on the right side. The boy had been ailing for more than a fortnight with fever and pain in the abdomen. There was a slight localized peritonitis in the hypogastrium adjoining the right inguinal region.

Lancet, London

April 16, 1921, 1, No. 5094

Nature of Flutter and Fibrillation of Auricle. T. Lewis.—p. 785.
*General Indications for Operative Exploration in Nerve Injuries. H. Platt.—p. 789.
Biochemistry of Germs and Other Proteins, with Special Reference to Problems of Immunity. D. Thomson.—p. 795.
*Case of Filaria Loa Infection. G. C. Low and E. J. O'Driscoll.—p. 798.
Spinal Anesthesia for Suprapubic Prostatectomy. H. M. Page.—p. 800.
*Case of Acute Aplastic Anemia. F. E. Larkins.—p. 801.
Small Outbreak of Dysentery in a Provincial Town. J. S. Manson and H. A. Mitchell.—p. 802.

Operative Exploration in Nerve Injuries.—From a serious consideration of the problem of the exploration or re-exploration of the injured nerves, it is suggested by Platt that the exploration or re-exploration should be considered under the following conditions: 1. In complete lesions of the median or ulnar nerves in the upper arm. The restoration of function in the proximal muscles is to be expected, even after long periods of delay, but distal recovery may probably not take place. For lesions of those nerves in which conduction is already present as far as the proximal branches with the total failure of distal regeneration, exploration is on the whole advisable, but short of resection and suture, which may be unjustifiable, nothing can be done. 2. In complete lesions of the median and ulnar nerves in the forearm. The potential restoration of sensation in the median is of such great importance as to warrant every effort to be made to ensure its occurrence. In lesions of the median in which partial sensory conduction is present, but with complete motor loss, resection and suture at this date should be strongly condemned. For the ulnar, where the intrinsic muscles are alone inactive, resection is always worth while. 3. In all complete sciatic lesions where end-to-end suture can be reasonably expected. 4. In musculo-spiral lesions exploration of the nerve should precede the performance of tendon transplantation.

Filaria Loa Infection.—Four distinct points Low and O'Driscoll says will help in diagnosing *Filaria loa* infection: (1) the actual presence of the adult worm in the eye; (2) the presence of *Filaria loa* embryos in the peripheral blood; (3) the presence or definite history of Calabar swellings; and (4) eosinophilia in people from the endemic area, with nothing else to explain its presence.

Acute Plastic Anemia Caused by Roentgen Ray.—In the case cited by Larkins exposure to roentgen rays for about fifteen years was considered to be the cause of the anemia. It was of short duration, about six months, and symptoms were complained of only during the last two months. The rapid diminution in the red and white corpuscles was very noticeable in this case, the reds disappearing at the rate of, roughly, 250,000 per week. The color index was never over 0.9. The differential leukocyte count was remarkable. The first blood count, made in October, 1920, was: Reds, 4,200,000; whites, 7,200; hemoglobin, 85 per cent. Differential leukocyte count: lymphocytes, 38 per cent.; polymorphonuclears, 60 per cent.; eosinophils, 1.7 per cent. March 6, 1921, it was: Reds, 1,350,000; whites, 1,030; hemoglobin, 26 per cent. Differential leukocyte count: polymorphonuclears, 20 per cent.; lymphocytes, large, 72 per cent., small, 6.5 per cent.; eosinophils, 5 per cent.; basophils, none. March 19: Reds, 1,005,000; whites, 840; hemoglobin, 18 per cent. Differential count: polymorphonuclears, 41 per cent.; lymphocytes, large, 54 per cent., small, 4 per cent.; eosinophils, none; basophils, none.

Journal of Tropical Medicine and Hygiene, London

April 1, 1921, 24, No. 7

Tropical and Extra-Tropical Edible Fruits of Far East. C. Ford.—p. 89.
Pancreatic Extract in Treatment of Sprue. T. R. Brown.—p. 90.
*Treatment of Bubonic Plague by Intravenous Injections of Iodin. S. M. Vassallo.—p. 92.

Iodin Intravenously in Bubonic Plague.—The treatment employed by Vassallo consisted in the administration of an iodin solution intravenously: iodin, 1 dram; potassium iodid, 1 ounce, and alcohol, 20 ounces. A small quantity is freshly prepared for each case, and 10 or 15 minims in about 2 ounces of distilled water, warmed to body temperature, are injected into a vein with the usual antiseptic precautions. The dose is repeated whenever it is thought necessary; for this the temperature is the best indication. After an intravenous injection the temperature, usually within twelve hours, comes down one or two degrees, this remission may be permanent or only temporary; should it be only temporary then another injection is indicated, and Vassallo usually gives then half a dose in the same amount of distilled water, if within twenty-four hours of the first injection. The injection is repeated every other day until the temperature becomes normal, and a last one is given when it has been normal for a day or two.

April 15, 1921, 84, No. 8

Trypanosomiasis. P. W. Bassett-Smith.—p. 105.
*Treatment of Hepatic Abscess with Emetin. V. S. Hodson.—p. 108.
Wild Birds a Cause of Spread of Bilharzia Infection. F. G. Cawston. —p. 109.

Emetin in Liver Abscess.—Hodson has treated a number of cases of hepatic abscess medically and they have appeared to be cured completely. In two cases of rupture through the lung recovery ensued at once after the exhibition of emetin in 1 grain doses for six or seven days.

Medical Journal of Australia, Sydney

March 5, 1921, 1, No. 10

*Symptomatology of Complete Transverse Lesions of Spinal Cord. G. E. Rennie.—p. 185.
Clinical Studies. III. Wounds of Common Femoral Artery. G. Bell. —p. 189.

March 12, 1921, 1, No. 11

Toxicity, Immunity Response and Treatment of Certain Helminthic Infestations. N. H. Fairley.—p. 205.

Symptomatology of Complete Transverse Lesion of Spinal Cord.—Rennie claims that the definite statement by Riddoch and Walshe, "that one of the diagnostic points in complete transverse lesions of the cord is the absence of extensor spasm, while they are present in cases of incomplete lesions," does not hold good. Moreover, it can no longer be maintained that extensor tone depends on intactness of the extrapyramidal tracts and that if these be divided, postural or extensor tone is lost. The only symptom on which reliance can be placed as indicating a complete transverse lesion of the cord is a permanent loss of all voluntary movements below the level of the lesion and a corresponding loss of all forms of sensation in the part of the body below the level of the lesion. If the lesion be high up in the dorsal region, a further confirmation of a complete lesion is the loss of all sensations from the abdominal viscera and loss of sensation of the functioning of the bladder and rectum. No reliance can be placed on the condition of the tendon jerks or of the cutaneous reflex actions, nor on the presence or absence of tone in any one group of muscles, though an increased tone in the flexor group and a diminished tone in the extensor group of muscles most probably points to a complete transverse lesion.

March 19, 1921, 1, No. 12

Acute Inflammation. H. H. Schlink.—p. 223.
Pneumococci in Pneumonia in Sydney. A. H. Tebbutt.—p. 228.
*Cases of Primary Anemia in Children.—p. 231.

Primary Anemia in Children.—Litchfield reports a case of pernicious anemia in a boy, aged 2 years and 3 months; case of lymphatic leukemia in a girl, aged 3 months; case of lymphatic leukemia or lymphosarcoma in a child, aged 10 years; lymphatic leukemia in a boy, aged 4 years, a girl, aged 9 years, a boy, aged 6 months, a girl, aged 1 year and 11 months, and a boy, aged 1 year and 7 months; acute myelogenous leukemia in a girl, aged 10 years.

Practitioner, London

February, 1921, 106, No. 3

Oriental Sore. A. W. Sheen.—p. 77.
Strain of Heart. W. Edgecombe.—p. 87.
Angina Pectoris. R. O. Moon.—p. 100.
Pericardial Factor and Its Bearing on Heart Disease. G. A. Stephens. —p. 109.
Recent Work on Diseases of Heart. C. W. Chapman.—p. 116.
Uses and Abuses of Psycho-Analysis. R. McN. Wilson.—p. 125.
Psychologic Analysis of Case of Simple Hysteria. J. K. Reid.—p. 132.
Importance of Muscular Relaxation in Examination of Joints. C. Westman.—p. 139.
Syphilitic Lesions Simulating or Associated with Tubercle. Z. P. Fernandez.—p. 144.

South African Medical Record, Cape Town

March 26, 1921, 19, No. 6

Early Diagnosis of Pulmonary Tuberculosis. D. P. Marais.—p. 102.
Unity of Origin of Herpes Zoster and Varicella. W. P. LeFeuvre.—p. 108.
Bilharzia: Its Cause, Complications and Cure. F. G. Cawston.—p. 113.
Pulmonary Embolism. C. M. Comrie-Sharp.—p. 116.

Archives des Maladies du Cœur, etc., Paris

February, 1921, 14, No. 2

Velocity of Arterial Pulse. I. C. Laubry, Mougeot and Giroux.—p. 69.
Permanent Nodal Bradycardia. L. Gallavardin and L. Gravier.—p. 71.
Sinusal Tachycardia, etc., in Diphtheria. R. Lutembacher.—p. 83.

Bulletin de l'Académie de Médecine, Paris

Dec. 20-22, 1920, 84, No. 41

The Centennial of the Académie de Médecine. pp. 387 to 555.

March 22, 1921, 85, No. 12

Commercial Infant Foods not Complete Foods. Doléris.—p. 360.
*Manifestations of Pneumococcus Infection. P. Bazy.—p. 365.
*Subsidence of Mammary Cancer After Castration. H. Reynès.—p. 383.
Mixed Kidney Tumor. E. Desnos.—p. 384.
Oculocardiac Reflex and Blood Pressure in Hydrocephalus. J. Roubinovitch and O. Tidemand-Johannessen.—p. 386.

Pneumococcus Infection.—Bazy reports some examples of extrapulmonary manifestations, including a hygroma of the subdeltoid bursa, an abscess near the anus, and cystitis. All these manifestations of pneumococcus infection are relatively mild, and usually soon heal under treatment.

Subsidence of Mammary Cancer After Castration.—Reynès reports the case of a nullipara of 45, menstruating regularly, with an inoperable cancer of the left breast and edema of the region and arm. There were two deep ulcerations, one in one axilla, and the regional glands were enlarged and hard, the head drawn down toward the left side. At the close of the menstrual period in October, 1920, Reynès removed both ovaries; one was normal, the other contained a small cyst. A week later the ulceration and the edema began to subside; in two months the ulcers had healed, and the glands and edema had disappeared. The general condition was completely transformed, and the patient now goes about. No other general or local treatment was applied. The similar cases on record confirm the remarkable relations which unite the ovary and the mammary glands, but in order for the castration to be successful the ovaries must be still actively functioning.

March 29, 1921, 85, No. 13

Treatment of Leprosy at Hawaii. E. Jeanselme.—p. 393.
Cancer in Animals. Cadiot.—p. 396.
Direct Research on the Blood. E. Lemoine.—p. 411.
*Appendicular Jaundice. C. P. Caplesco.—p. 414.
*Dangers from Handling Radium. H. Bordier.—p. 416.

Appendicular Jaundice.—Caplesco describes a mild jaundice due to toxins formed in a chronically but latent diseased appendix. The conjunctiva shows the jaundice, and the appendix is tender. He urges to examine the conjunctiva in dubious cases of indigestion or oppression in the stomach or migraine, and if jaundice is evident, to explore the appendix. Appendectomy puts an end to all disturbances.

Dangers from Handling Radium.—Bordier cites Mottram's three recent cases of fatal anemia, of the type induced by toxic gases, in three attendants at the London Radium Institute, mentioned in the London Letter, p. 1360.

Bulletin Médical, Paris

April 9, 1921, 35, No. 15

Acute Pericarditis in Children. J. Renault.—p. 293.

Bulletins de la Société Médicale des Hôpitaux, Paris

March 18, 1921, 45, No. 10

*Treatment to Cure Syphilis. L. Queyrat.—p. 367.
Lymphosarcoma of Thymus in Young Woman. P. Harvier.—p. 374.
Recklinghausen's Disease in Boy of 13. J. Comby.—p. 382.
*The Induced-Glycuronia Test. M. Chiray and E. Caille.—p. 383.

Inguinal Lymphogranulomatosis. Favre.—p. 395.
Transient Spirocheturia in Infectious Jaundice. N. Piessinger and H. Janet.—p. 396.
*Fatal Acute Uremia After Neo-Arsphenamin. Lesné.—p. 399.
Frequency of Spina Bifida. Crouzon and Bibaque.—p. 403.
Esophagoscope. R. Bensaude and M. Lelong.—p. 405.
Case of Miculicz' Disease. H. Méry and others.—p. 406.
*Blood Pressure Under Serotherapy. A. Jousset and L. Binet.—p. 412.
*Febrile Syphilis of the Liver. A. Gilbert and others.—p. 417.
Epidemic Jaundice at Paris. P. F. Armand-Delille.—p. 435.
Sclerodermia with Spina Bifida. Queyrat and others.—p. 437.

Treatment to Cure Syphilis.—Queyrat warns that as antivenereal disease measures are multiplied, we are encountering constantly larger numbers of syphilitics in the infectious second stage. Syphilitics are being treated ineffectually, and physicians seem to be content with the subsidence of the manifestations without striving to eradicate the disease. Among the instances he cites is a man with multiple mucous patches, swarming with spirochetes, and a 3 plus reaction. He had taken two courses of treatment during the year, but the whole was absolutely inadequate. In the discussion that followed, Pinard emphasized what he calls the four great laws for treating syphilis: (1) the law of progression of doses from a small one to begin with; (2) the law of large doses; (3) the law of short intervals, and (4) the law of reactivation. Small doses allow latent foci to persist and induce meningeal reactions and clinical mishaps. He declares that neurosyphilis and visceral syphilis in many cases are only the result of inadequate treatment rousing reactions in the meninges or viscera. One woman complained of muscular fatigue in her legs, and series of ten injections of 15 cg. of neo-arsphenamin were instituted with six-week intervals. This treatment violated the first three of the above laws, while the fourth law imposed the penalty, the reactivation accidents. The young woman at the third series developed pains in the joints, and is now bedridden, with terrible pains from the reactivation, and she has become addicted to morphin in seeking relief. The small doses seem to be as dangerous in recent syphilis as in the old cases.

Induced Glycuronuria Test.—Chiray and Caille expatiate on the important information to be derived from the appearance of glycuronic acid in the urine after swallowing, fasting, two capsules containing each 0.5 gm. of natural camphor. The urine is collected at once and again six hours later. They describe a lead colorimetric method for determining the glycuronic acid in the urine. This throws light on the functioning of the liver. In the normal, glycuronuria follows, the figure running from 0.01 or 0.04 up to 0.08 gm. in four hours, and it keeps high for six or eight hours. For children they use half the dose. Full details of the technic are given.

Fatal Acute Uremia After Neo-Arsphenamin.—Lesné was treating a woman of 38 with syphilis, of six years' standing, apparently extremely benign. He gave her three series of intravenous injections of neo-arsphenamin in doses of 15, 30 and 45 cg., all well tolerated, in the course of the year. A new injection of 15 cg. was followed by anuria with acute uremia and death the eighth day. In the discussion, de Massary reported a similar fatality after a series of injections of arsphenamin. The third week, an injection of 60 cg. was followed by toxic symptoms, including those of aplastic pernicious anemia and meningitis, with fatal coma the fourteenth day. No lesions could be discovered at necropsy but there was much congestion in the meninges. No arsenic was found in the organs. Netter referred further to two fatalities of which he knows; in one case the arsphenamin treatment had been given on a mistaken diagnosis at the beginning of epidemic encephalitis. It had evidently aggravated the condition, with fatal outcome.

Lowering of Blood Pressure Under Serotherapy.—Jousset and Binet present data to demonstrate that therapeutic antiserums have a pronounced action in reducing the blood pressure. This explains the somnolency in children immediately after a first and large dose of the antiserum. Hypotension seems to be a normal feature of serotherapy. The knowledge of this imposes caution, and explains the benefit from stimulants and of epinephrin with the serotherapy. The epinephrin can be given by the rectum; by this means it escapes the barrier of the liver. This often restored the pressure to approximately normal in from thirty to sixty minutes. With 1 mg. of epinephrin daily, in suppositories, the blood pressure can be kept practically normal.

Febrile Syphilitic Disease of the Liver.—Gilbert and his co-workers have now a record of five cases of enlargement of the liver in the tertiary phase of syphilis with fever keeping up for months and years, but no jaundice. This fever is peculiarly rebellious to the ordinary measures, while it yields rapidly to mercurial or arsenical treatment. In the cases described the fever had kept up for from two months to six years without interruption, or with only brief remissions. In some, the general health did not seem impaired. This hypertrophic, febrile syphilitic hepatitis may be the incipient form of definite syphilitic disease of the liver. Although the fever subsides under specific treatment, the liver does not always return to normal size. They suggest that fever in any form of syphilis may be due to latent involvement of the liver, as we know the important part played by the liver in the regulation of the heat of the organism. In the discussion that followed Netter reported a case of fever for twenty years which disappeared after the second mercurial injection. Achard mentioned two cases in which an operation had been done or was contemplated for hydatid cyst of the liver, but the course of the cases corrected this to syphilitic disease of this organ. Abrami warned that amebic disease of the liver must not be forgotten, as this also may subside under arsenical treatment. In a recent case, five examinations had been negative, but emetin enemas disclosed encysted amebas and neo-arsphenamin treatment was promptly followed by disappearance of all the symptoms. Mercurial treatment differentiates syphilitic and amebic disease of the liver, as they both present an almost identical clinical picture and both respond almost alike to arsenical treatment. Dufour added that tertiary syphilitic hepatitis will not always yield to medical treatment. He had a patient for whom the diagnosis had been made in turn of angiocholitis, pylorospasm, appendicitis and syphilis, but no benefit was realized until the surgeon cleared out eight suppurating gummatous tumors in the liver.

Encéphale, Paris

March, 1921, **16**, No. 3

Amyotrophic Lateral Sclerosis. Gerber and Naville.—p. 113.
Feeblemindedness plus Obesity in Man with Inherited Syphilis. Laignel-Lavastine and G. Heuyer.—p. 127.
War and Juvenile Delinquency. P. Courbon.—p. 136.
Localized Serous Meningitis. C. I. Urechia.—p. 141.
Monakow's Conception of Diaschisis. R. Mourgue.—p. 144.

Gynécologie et Obstétrique, Paris

February-March, 1921, **3**, No. 2-3

The Corpus Luteum of Pregnancy. A. Gross.—p. 73.
*Infarcts in the Placenta. R. Haffner.—p. 81.
*Malignant Myoma of the Uterus. P. Jacquin.—p. 90.
*Diagnosis of Rupture of the Uterus. R. Keller.—p. 112.
*Fibroma and Pregnancy. M. Reeb.—p. 129.
*Physiology of the Ovaries. G. Schickelé.—p. 170.
Extra-Uterine Pregnancy with Retention of Fetus. Frey.—p. 197.
Hematoma Simulating Rupture of Uterus. G. Schickelé.—p. 204.

Infarcts in the Placenta.—Haffner was unable to find any connection between infarcts in the placenta and albuminuria in 400 cases examined.

Malignant Myoma of the Uterus.—Jacquin reports a case of a tumor which histologically seemed to be a simple myoma even under the microscope after hysterectomy, but there was recurrence in ten months, speedily fatal notwithstanding roentgen-ray treatment. Four similar cases on record are cited, and the absence of intercellular connective tissue in all the cases is mentioned as the only feature of these malignant myomas which might have cast doubt on their benign character. Jacquin describes further a case in which a myosarcoma developed from a fibromyoma in a nullipara of 65. In a third case a small-cell sarcoma and in a fourth, a polymorphous sarcoma had developed from a preexisting fibromyoma. Recurrence followed the operation in three of the four cases, the longest interval twelve months.

Diagnosis of Rupture of the Uterus.—Keller has been impressed with the deceptive insignificance of the symptoms from rupture of the uterus in certain cases. In one the lower segment had ruptured but without any symptoms until a retroperitoneal hematoma had become infected. In this case and in 11 of his total 22 cases, the rupture occurred spon-

taneously in the maternity under close medical supervision. In 5 of the cases one of the round ligaments had been stretched very taut, in one case both ligaments were taut, and in one case there was pain in the inferior segment besides. In 2 cases Bandl's ring was pronounced. These were the only premonitory signs; in the other cases the rupture occurred without warning. In one case expression of the placenta was painful. In 3 cases a soft tumor rapidly developed above the symphysis; in 2 others the placenta was retained. There was absolutely nothing to suggest the rupture in 2 cases. The rupture was in the cervix in all but one case, and it was transverse.

Fibromas and Gestation.—Fifteen cases are described from the Strasbourg maternity. Every effort was made to save the uterus if the woman was young, but hysterectomy was the rule with women near the menopause after delivering the child.

Ovarian Functioning.—Among the facts related by Schickelé are some that show that menstruation can occur in the absence of any corpus luteum. The corpus luteum and the uterus mucosa seem to be reciprocally independent.

Paris Médical

April 2, 1921, 11, No. 14

Pathology of Digestive Tract in 1921. P. Harvier.—p. 257.
*Radiotherapy of Cancer of Tongue. C. Regaud.—p. 265.
Operative Treatment of Cancer of Colon. A. Schwartz.—p. 272.
Amebic Liver Disease Without Suppuration. G. Paisseau.—p. 277.
Volvulus of Colon. V. Pauchet.—p. 281.
*Defecation After Meals. P. Carnot.—p. 283.

Cancer of the Tongue.—Regaud urges the necessity for microscopic examination of a scrap from any suspicious growth on the tongue, as the nonepidermoid malignant growths yield to radium therapy most readily. He warns against treatment as for syphilis, although in over 50 per cent. the cancer develops on a syphilitic lesion. Precious time is wasted, and specific treatment at this stage only whips up the malignant disease. Burying in the growth hollow needles containing a radium salt is the simplest and most even method of radium treatment, but he reiterates that a cancer should either be cut out entirely at one sitting or be destroyed by the radium at one sitting. Smaller repeated doses are never effectual. Repeated doses increase the resisting power of the cancer cells while they reduce the resisting power of the normal cells. His experience has demonstrated further that the malignant disease extends farther than would be supposed from the aspect of the lesion; recurrence is always at the periphery.

Postprandial Defecation.—Carnot explains that the defecation which normally follows a feeding in infants and a meal in certain adults may be due to the pressure of the weighted stomach on the colon, in addition to the play of the reflexes. The mechanism may be exaggerated by colitis, alimentary anaphylaxis, derangement of the biliary apparatus or indigestion entailing postprandial diarrhea.

April 9, 1921, 11, No. 15

Anomalies in Ossification of the Patella. A. Mouchet.—p. 289.
*Syphilitic Mastitis. R. Burnier.—p. 292.
Cerium Salts in Treatment of Tuberculosis. Amaudrut.—p. 297.

Syphilitic Mastitis.—Burnier quotes from the records thirty-one cases and adds two to the list in which mastitis of syphilitic origin developed during the secondary or tertiary phase of syphilis; in three cases the syphilis was inherited. Trauma was not incriminated in any instance. The swelling of the gland may occur with or without pain, and it often simulates cancer. The lesions generally subside in a few weeks whatever treatment is used, but in four of the cases several months elapsed before the conditions returned to normal. The assumption of a syphilitic origin should not be rejected too hastily. Only twenty of the total cases were in women, but there was no connection with a pregnancy except in one case.

Presse Médicale, Paris

April 2, 1921, 29, No. 27

*Blocking the Splanchnic Nerves. H. Billet and E. Laborde.—p. 261.
*Causalgia. J. Tinel.—p. 263.
*Sugar Infusion in Heart Disease. L. Cheinisse.—p. 266.

Blocking the Splanchnic Nerves.—Billet and Laborde comment on the efficacy, the simplicity and the absence of shock with this method of regional anesthesia for the upper abdomen. The patient lies on his side and the needle is introduced just below the twelfth rib, 7 cm. from the line of the spinous processes. The needle, 12 cm. long, is pushed in until it hits the body of the vertebra. The needle is then slanted at a tangent to the vertebra until the tip no longer meets with any resistance, showing that it has passed through the muscles into the paravertebral cellular tissue. Then the anesthetic is injected on one or both sides. It spreads throughout the paravertebral cellular zone, infiltrating the splanchnic nerves and the solar plexus. It is far from a blind method, as the needle is introduced into a well determined region, and they regard it as one of the best, if not the best, method of anesthesia for operations in the upper abdomen. The only danger, they say, is from the renal vein, and they explain how to avoid contact with this vein.

Causalgia.—Tinel describes sympathetic algias, a mild form of the clinical picture of traumatic causalgia. The nerves the most frequently involved are those in which sympathetic fibers most abound. The features of the clinical picture are distinctly of sympathetic origin. The sensations are not actual pains but rather a burning, a sense of oppression, with pulsation and the sensation of the blood wave. In five cases described the disturbance was in the hand, thigh or leg, and in one case in the face and neck. These disturbances develop in the predisposed with an irritable sympathetic system. Unless a cause can be discovered and removed, treatment is disappointing; the only benefit he found from drugs was with potassium iodid and calcium chlorid in a few cases in which vascular spasm cooperated. The main thing is to tranquilize and reassure the patients that a spontaneous cure is certain in time in good conditions of repose and hygiene. These algias, although undoubtedly rooted in some disturbance in the sympathetic system on a physiologic basis, are yet amenable to a certain extent to psychotherapy.

Benefit from Sugar Infusion in Heart Disease.—Cheinisse reviews the work of Enriquez and Gutmann, eight years ago, in regard to the advantages of intravenous injection of concentrated solutions of sugar in toxic infectious conditions and inanition, and other experiences in this line, including Büdingen's advocacy of hypertonic glucose solution in treatment of heart disease. The latter advises it to supplement digitalis, or to use in its place. With sclerosis of the coronary arteries, Büdingen gives a series of these intravenous injections once a year. He also finds it useful in chronic myocarditis not responding to digitalis. By this means he combats what he calls the cardiodystrophia resulting from an inadequate sugar content of the blood or from an inadequate supply of the blood brought to the coronary arteries, or to overcome disturbance in the nourishment of the heart from microbian or other poisons.

April 6, 1921, 29, No. 28

*Subacute Venous Septicemia. Vaquez and Leconte.—p. 273.
Access to a Projectile in the Ear. G. Portmann.—p. 274.
*Flaking Power of the Blood Serum. Hélouin.—p. 277.

Subacute Venous Septicemia.—Vaquez and Leconte discuss subacute venous septicemia restricted to a small focus and spreading by small foci; also the phlegmasia type; the type of pulmonary infarct causing hemoptysis, and the quadriplegic type. They describe examples of each. These local septicemias are liable to entail trophic disturbance or rebellious impotence requiring long and careful treatment. The immobilization should not be kept up any longer than necessary, and great caution should be used with irritating substances and even with any local applications, as even maceration of the skin is too often followed by erosions. It does no harm to mobilize the region if three weeks have elapsed after the temperature has returned to normal. It is important to distinguish purely periarticular lesions, as these permit mobilization at any time under an anesthetic.

Flaking Power of the Serum.—Hélouin tabulates the findings in uremia, cholemia and spirochetosis in respect to the flaking power of the blood serum. None of these seem able to modify the serologic reaction by Vernes' technic, although spirochetosis may induce the Wassermann reaction.

Schweizerische medizinische Wochenschrift, Basel

March 31, 1921, 51, No. 13

*Sporadic Hemophilia in Woman of 28. E. Montanus.—p. 289.
Occupational Skin Disease in Briquette Makers. R. Schärer.—p. 296.
*Immune Reactions with Artificial Pneumothorax. U. Carpi.—p. 299.
Technic for Obturator Herniotomy. A. Steinegger.—p. 301.

Sporadic Hemophilia in Woman of 28.—Montanus compares with his case the literature on this subject. In his case in the periods of hemorrhage the blood did not coagulate at all, but in the intervals coagulation occurred normally.

Immune Reactions with Artificial Pneumothorax.—Carpi found the opsonic index constantly increased in cases of pulmonary tuberculosis under treatment with artificial pneumothorax. He cites as evidence of the immune reactions the cure of laryngeal tuberculosis during the artificial pneumothorax treatment. Even more demonstrative is the cure of renal tuberculosis under these conditions. He knows of one case in which the cure of classic tuberculosis of the kidney was confirmed three years later. Such cases, he says, establish the stimulating action on the defensive forces and specific stimulation of the morbid foci under the influence of the changes brought about by the artificial pneumothorax.

Pediatria, Naples

March 1, 1921, 29, No. 5

*Epitrochlear Adenitis in Infants. S. Fabris.—p. 193.
*Familial Ophthalmoplegia. I. Fiorenza.—p. 200.
*Congenital Megacolon. U. Provinciali.—p. 209.
*Alizarin Test for Tuberculosis. G. Genoese.—p. 227.

Epitrochlear Adenitis in Infants.—Fabris tabulates the findings in 2605 infants examined for enlargement of the epitrochlear glands. It was evident in 32 per cent. of the children under 1 year old, and in 33 per cent. of those up to 2 years who presented signs of inherited syphilis. The figure was only 7 and 9 per cent. in the tuberculous children, and 7 and 11 per cent. in those with rachitis. Epitrochlear adenitis, therefore, may be regarded as a confirming sign in inherited syphilis, to judge from his 379 cases with the inherited taint.

Familial Ophthalmoplegia.—Fiorenza reports that two brothers presented partial external ophthalmoplegia, and a third, total. The ages were from 16 to 30. No inherited taint was discoverable except that the maternal grandmother had had occasional convulsions.

Two Cases of Congenital Megacolon.—Provinciali was able to evacuate the distended colon in one infant but the other died. Treatment, he emphasizes, should be directed to regulate the reflexes and combat the tendency to spasm.

Alizarin Test for Tuberculosis.—Genoese has been applying to sixty children Roncal's method of testing tuberculous sputum with a 1 per cent. alcoholic solution of alizarin. The response was always negative in twenty healthy children; in forty with various diseases it was positive only in the tuberculous.

Policlinico, Rome

March 28, 1921, 28, No. 13

*Diabetes and Trauma. S. Diez.—p. 431.
*Anesthesia of the Trigeminal Nerve. G. Trogu.—p. 436.
Silver Salvarsan. R. Angeli.—p. 439.

Diabetes and Trauma.—Diez cites statistics showing trauma as a factor in 2 per cent. of 4,068 cases of diabetes; up to 5.6 per cent. in 669 other cases, and in 10 per cent. of Cantani's 1,004 cases. The trauma affected the skull, spine or abdomen, or was peripheral. In many of the cases there was a traumatic neurosis besides. He discusses the causal connection from various standpoints, and the aggravating influence of the diabetes on the recovery from an accident, and also the influence of a trauma on the development of gangrene in diabetes. Diabetics should be warned against occupations exposing them to accidents.

Anesthesia of Trigeminal Nerve.—Trogu emphasizes the advantage of having the patient conscious in operations on the jaw, as aspiration of secretions can thus be averted. He has found injection of alcohol into the gasserian ganglion the most effectual and convenient method for local anesthesia, and also for treatment of trigeminal neuralgia, and reports two cancer cases and two neuralgia cases to demonstrate the superiority of this technic, by Härtel's method.

March 15, 1921, 28, Surgical Section No. 3

*Fascia Implants. P. Chironi.—p. 93.
*Implants of Fat Tissue. A. Pennisi.—p. 113. Conc'n.
*Operations on Peripheral Nerves. O. Tenani.—p. 122.
*Operative Treatment of Causalgia. A. Turco.—p. 127.

Fascia Implants.—Chironi gives ten photomicrograms showing the substitution in time of connective tissue for a free transplant of fascia in his experiments on rabbits and dogs, while auto-implants retained their histologic structure nearly throughout, and their vitality.

Implants of Fat Tissue.—Pennisi emphasizes the advantages of fat tissue to isolate nerves, tendons and vessels, and protect them against erosion and infection. He says that fat makes the best pad for the bottom of a stump after amputation, and to bridge a gap in the dura and brain. The fragments of the skull can be replaced over it without fear of adhesions, while the fat implant protects against hemorrhage and inflammation. An osteoperiosteal transplant might supplement the thin sheet of fat tissue in operations on the head. The adaptability and vitality of fat tissue implants render them particularly useful for operations on joints, hernias, and cavities in bones. In sixty-eight cases of the latter the success was complete in the aseptic group, and even in many cases of chronic suppurating processes.

Operations on Peripheral Nerves.—In Tenani's five cases of suture and six of neurolysis, the best results were always obtained with the radial nerve. He thinks an interval of two years is necessary before attempting to estimate the final outcome.

Treatment of Causalgia.—In Turco's case of causalgia after severing of the median nerve, no benefit followed neurolysis, but decortication of the humeral artery for a stretch of 7 cm. restored clinically normal conditions. This success confirms Leriche's view that the perivascular network of sympathetic fibers is responsible for the disturbances.

Riforma Medica, Naples

March 12, 1921, 37, No. 11

*Clinical Significance of Plethysmography. G. Pezzali.—p. 242.
*Correction of Deformity of Hand. O. Nuzzi.—p. 248.
Glycogen in Sputum. G. Felsani.—p. 249.
Immobilization with Simple Fractures. D. Taddei.—p. 252.

Plethysmography.—Pezzali analyzes the findings in a large number of cases as they threw light on the effect of drugs and on the prognosis. They prove anew that the heart, the vessels and the vasomotor centers must be regarded as a single whole, and that it is futile to study either alone.

Deformity of the Hand.—Nuzzi refers to what he calls surgical distal intermetacarpolysis, and describes his success in restoring the functional use of the hand in one case.

Rivista Critica di Clinica Medica, Florence

March 15, 1921, 22, No. 6

*Congenital Malaria. P. Pennato.—p. 85.

Congenital Malaria.—Pennato reports a case in which the mother died at childbirth from malaria while the fetus was apparently free from the slightest indication of malaria. In other cases the fetus suffers. The protecting action of the placenta evidently varies from case to case.

Archivos Españoles de Pediatría, Madrid

February, 1921, 5, No. 2

*The Specific Defenses in Children. J. Verdes Montenegro.—p. 65.
*Fatal Chorea. L. Morquio.—p. 84.
Febrile Influenza in Children. J. García del Diestro.—p. 99.

The Specific Defenses in Children.—Verdes Montenegro has long been teaching that the reaction to the partial antigens of the tubercle bacillus is much more instructive than the reaction to any whole tuberculin test. He made four intradermal tests with each of the three partial antigens in twenty-four children before and after a three months' course at a seashore sanatorium. Along with the general improvement, in the active group the reactions were always intensified.

Fatal Chorea.—Morquio remarks that nothing to suggest syphilis could be discovered in a recent series of fifteen cases of chorea. He has had two cases recently of recurring chorea,

the fourth and fifth attacks, in girls who have never had rheumatism or heart disease. In a boy of 11, an attack of very severe chorea was soon followed by febrile epidemic encephalitis. In three other children, chorea of unusual severity with stormy onset gradually yielded to a paralytic condition with fever, fatal in one or two months. Necropsy revealed diffuse encephalitis, and in one case also an old endocarditis. He discusses the relations between chorea and epidemic encephalitis and articular rheumatism, and the chorea developing after a fright.

Gaceta Médica de Caracas, Venezuela

Feb. 15, 1921, **28**, No. 3

*Arsenicals in Treatment of Adnexitis. I. Lares R.—p. 29. Idem. D. Lobo.—p. 29.

Arsenicals in Treatment of Adenexitis.—Lobo declares that before resorting to surgical measures, thorough arsenical treatment should be given in cases of adnexitis. He cites excellent results obtained with arsenicals or other measures. Lares reports a case in which the adnexitis subsided completely under neo-arsphenamin treatment, three doses, to a total of 0.5 gm. The operation in this case had been deferred only because of the pathologic condition of the liver, and all the symptoms subsided under the arsenical treatment.

Deutsche medizinische Wochenschrift, Berlin

March 24, 1921, **47**, No. 12

Pharmacologic Observations on the Healthy and the Sick. A. Bornstein.—p. 317.
Inadequate Signature for Prescriptions. G. Joachimoglu.—p. 317.
Clinical Lectures on Cutaneous Diseases. P. G. Unna.—p. 319.
Epidemic Myelo-Encephalitis. A. Böhme.—p. 319.
Differential Diagnosis of Malta Fever. A. Luger.—p. 321.
Kreusfuchs Method of Measuring Aorta. Weiss and Lauda.—p. 322.
Diffuse Colloid Goiter. A. Hellwig.—p. 324.
Results of Steinach Operation. Levy-Lenz and Schmidt.—p. 327.
Vaccination Against Smallpox in the Newborn and During Pregnancy, and the Puerperium. F. Kirstein.—p. 328.
Significance of Negative Wassermann Reaction Effected by Mercurial Treatment. M. Funfack.—p. 330.
Combination Sachs-Georgi-Wassermann Reaction. Keining.—p. 330.
The Friedmann Tuberculosis Strain. G. Schröder.—p. 331.
Infiltration Following Friedmann Treatment. Graus.—p. 331.
*Intravenous Injection of Glucose Solution. Korbsch.—p. 332.
Determination of Dosage in Phototherapy. J. Schütze.—p. 332.
Venipuncture with Trocar Needle. H. Robert.—p. 333.
Present Status of Vaccine Theory. H. Reiter.—p. 333.
Infant Feeding and Weaning. L. Langstein.—p. 335.

Hypertonic Sugar Solution by the Vein.—Korbsch has gone beyond Büdingen's 20 per cent. solution of grape sugar in treatment of heart disease with edema, and reports that a 50 per cent. solution of dextrose in a daily dose of 20 c.c. was borne without harm by his patients, and exerted an extremely favorable influence on the diseased heart. He adds that he sees no reason why the amount could not be increased to 50 or even 100 c.c. This 50 per cent. solution seems to be the limit as a more concentrated solution than this would be too thick to inject intravenously.

Deutsche Zeitschrift für Chirurgie, Leipzig

March, 1921, **161**, No. 3-5

*Tuberculin Test in Surgical Tuberculosis. C. Mau.—p. 145.
Unreliability of Urine Test for Tuberculosis. E. König.—p. 162.
*Congenital Megacolon. G. Hoffmann.—p. 175.
*Invaginations. E. Michaelsen.—p. 226.
*Perforation of Gastric or Duodenal Ulcer. M. Schülein.—p. 242.
*Postoperative Tetany. R. Pamperl.—p. 258.
Injury of Vessels in the Neck. H. Gödde.—p. 282.
*Congenital Dislocation of Hip Joint. M. Brandes.—p. 289.
*Sensations in Muscles. C. ten Horn.—p. 338.

Tuberculin Test in Surgical Tuberculosis.—Mau applied the skin tuberculin test in about 200 cases of bone and joint disease, and states that a positive focal response was obtained with surgical tuberculosis only in about 66 per cent. of the cases. He thinks that with a negative response to various tuberculin tests, we can positively exclude tuberculosis.

Congenital Megacolon.—Hoffmann reviews the operative cases of megacolon since 1911 in Payr's service. The list includes 13 men, 3 women and 2 children, and 7 of the 18 died, including 1 little girl who succumbed to inanition. These cases seem to indicate that a congenital enlargement of part of the bowel is not so rare as some assume, although the picture of megacolon may not develop until later in life.

Invaginations.—Michaelsen relates that invagination of the bowel was the cause of 12.5 per cent. of 343 cases of ileus in Ringel's service. Fully 56 per cent. of the cases were in infants; only 16 per cent. in adults. The mortality in infants was 75 per cent., in adults 43 per cent. She advocates operative reduction of the invagination after failure of attempts to correct the condition by injecting fluid in infants and children. In adults, resection may sometimes be indicated.

Perforation of Gastric or Duodenal Ulcer.—Schülein states that 3 died of the 14 patients treated by gastro-enterostomy after an interval of over sixteen hours. There was no mortality in the 9 cases in which the operation followed the perforation within nine hours. All died in the 6 with an interval of eighteen hours but 50 per cent. survived of the 4 in which the interval was less than eighteen hours. These experiences confirm that up to eighteen hours is not too late for operation in patients that are not too much debilitated by the preceding ulcer disturbance. The perforation itself should be sutured and covered with omentum, with a supplementary gastro-enterostomy. In desperate cases, simple drainage of the ulcer may be tried, postponing excision or resection until the acute stage of the peritonitis is past.

Postoperative Tetany.—Pamperl reports five cases of severe tetany after thyroidectomy, in which benefit followed parathyroid treatment, plus sedatives, amounting to a complete cure in some. In the pregnant, this may render it unnecessary to interrupt the pregnancy, and give time for parathyroid grafting. He thinks that, in addition to injury of the parathyroid bodies, other factors may be involved, including the extensive reduction of thyroid tissue, the disturbances in the heart action, and the disturbances in the internal secretions from the hyperthyroidism. Postoperative tetany is usually encountered only in women.

Congenital Dislocation of the Hip Joint.—Brandes discusses the importance of forward torsion with congenital dislocation of the hip joint, and means to correct it. This element in the clinical picture is too often overlooked, and this invites recurrence. By the correction of this antetorsion, he has been able to obtain permanently favorable results in 10 per cent. more of his cases.

Sensations in the Muscles.—This article relates the results of extensive tests in regard to the innervation, sensations, etc., of the muscles as determined in the tunnels in cinematized amputation stumps. These provide a remarkable means for estimating conditions in the depths of the muscles.

Monatsschrift f. Geb. u. Gynäkologie, Berlin

February, 1921, **54**, No. 2

Behavior of Capillaries in Uterus During Menstrual Cycle. E. Mauthner.—p. 81.
*Functioning of Ovary During Pregnancy. O. O. Fellner.—p. 88.
Incomplete External Rupture of Uterus with Necropsy. H. Katz.—p. 95.
*Ovarian Pregnancy. W. Liebe.—p. 102.
A Lithopedion. H. Hinterstoisser.—p. 109.
Retroperitoneal Cysts. W. Zangemeister.—p. 111.
*Artificial Vagina. M. Brenner.—p. 112.

The Activity of the Ovaries During Gestation.—Fellner presents evidence to show that the secretory function of the ovaries is even more active during a pregnancy than at other times. The female sexual lipoid is produced during gestation in larger amounts, like the substances secreted in all the other endocrine glands.

Ovarian Pregnancy.—The ovary was removed on account of supposed cystic enlargement, but a fetus was found in it, the ovary elements having nearly all been superseded by the intact developing ovum.

Artificial Vagina.—Brenner reports another successful case in which a vagina was made out of a loop of small intestine. A total of seventy-three cases of plastic reconstruction of the vagina have been published, including thirty-two in which the small intestine and fourteen in which the large intestine was utilized. The former has a record of three fatalities.

Monatsschrift für Kinderheilkunde, Berlin

March, 1921, **19**, No. 6

Skin Capillaries in Pseudo-Anemia in Infants. Hochschild.—p. 449.
Purpura, with Thrombocytopenia, After Vaccination. Nocke.—p. 455.
Edema in the Prematurely Born. G. Petényi.—p. 461.
Congenital Duodenal Atresia. M. Salzmann.—p. 468.

*Syndrome Due to Damage from Thirst in Newborn. C. Meier.—p. 470.
Two Cases of Epidemic Dysentery in Newborn. Walz-Georgea.—p. 477.
Observations on Diphtheria in Children. H. Feldmann.—p. 480.
Infusion into Longitudinal Sinus in Infants. Beumer.—p. 494.
Disease and Heredity in the Child. A. Peiper.—p. 500.
*Lipase in Blood Serum in Infants. Beumer and Fontaine.—p. 524.

Grave Syndrome Produced by Damage from Lack of Water in the Newborn and Other Infants.—Meier reports seven cases to show that breast-fed infants, especially during the first ten days of existence, occasionally suffer from lack of water on account of loss of appetite owing to some infection, even a slight "cold." The disinclination to take food prevents them from getting the needed fluid. The vicious circle formed by the reduction of the water balance and the accompanying anorexia, by which the child is discouraged from satisfying its thirst, must be broken by the forced introduction of water. The clinical picture bears a great resemblance to alimentary toxicosis, in which lack of fluids also plays an important rôle, since complete recovery may follow ingestion of water. Meier assumes that in his cases the change in the viscosity of the blood and accumulation of decomposition products in the blood brought about the grave phenomena. The quickest therapeutic results were obtained by introducing into the stomach through a catheter in the nose 150 c.c. of a carbonated alkaline mineral water at a temperature of from 100 to 104 F. The artificially fed get more water in proportion and are not so liable to suffer from this impoverishment of fluid.

Lipase in Relation to Nutritional Disturbances in Infants.—Beumer and Fontaine admit that the function of the lipase of the blood serum, and more particularly its relation to fat metabolism, are by no means settled questions. While healthy infants usually have a high percentage of lipase, nevertheless they sometimes present also lower values. Diarrhea, during infancy, is always followed by a transient decrease of lipase. The most marked decrease in lipase was found in connection with alimentary toxicoses, which agrees with Lust's findings that lipase disappears from the intestine in alimentary toxicosis. This points to a possible connection between the lipase of the blood serum and that of the intestine and its common origin from the pancreas. In anaphylactic shock the lipase content of the blood serum remains unchanged. The lipase values in tuberculosis were not characteristic of the gravity of the disease process. The lumbar spinal fluid contains no lipase, not even in the presence of marked lymphocytosis. They tabulate the findings in thirty-two infants, nineteen older children and two adults.

Münchener medizinische Wochenschrift, Munich

March 25, 1921, 68, No. 12

Biology of Blood Plasma. H. Sachs and K. von Oettingen.—p. 351.
Treatment of Pleural Empyema. W. Jehn.—p. 353.
Late Epilepsy after Gunshot Injuries of Head. Voss.—p. 358.
Etiology of Dental Caries. A. Seitz.—p. 360.
*Laryngeal Pellet in Treatment of Aphonia. O. Muck.—p. 361.
Simple Ionization Gage for Roentgen Work. H. Martius.—p. 362.
Facial Asymmetry as Sign of Cervicodorsal Scoliosis. Staub.—p. 364.
Percutaneous Tuberculin Test. Moro.—p. 364.
*Semisitting Position for Patient in Bed. H. Burckhardt.—p. 364.
Activation by Unspecific Therapy. W. Weichardt.—p. 365.
Disadvantages of Iodin for Laparotomies. P. Schumacher.—p. 366.
Duodenal Ulcer. Gerhardt.—p. 367.

Laryngeal Pellet in Treatment of Aphonia.—During the war, Muck reported his success in treating war aphonia by lowering a pellet or small ball into the larynx (summarized in THE JOURNAL, Dec. 23, 1916, p. 1977). He now reports his further success with the method in peace times. The technic is not described in detail, but reference is made to his previous articles on the subject. Singers, preachers, teachers and actors whose voices had become impaired have been much benefited or cured by a few treatments (sometimes one treatment suffices), provided there are no organic changes in the vocal organs. The fright as the patient feels he is suffocating may start the vocal reflex anew, and the aphonia be conquered at a single sitting, even when it has persisted for up to twenty years.

Semisitting Position for Patient in Bed.—Burckhardt describes with an illustration the method that he has found satisfactory to secure for the patient a comfortable semi-erect position. He wraps a blanket about a cane or sawed-off broom handle and fastens it with safety pins. This roll is placed crosswise of the bed under the thighs and is kept from slipping down by the ends of the cane being tied with long cords to the head of the bed. Pillows or a frame furnish the support for the back.

Zeitschrift für Kinderheilkunde, Berlin

Jan. 18, 1921, 27, No. 5-6

*Jaundice in the Newborn. B. Schick.—p. 231; Idem. R. Wagner.—p. 251.
*Calcium and the Autonomic Nervous System. W. Usener.—p. 262.
Cholesterin Content of Milk. L. Wacker and K. F. Bech.—p. 288.
*Pyknolepsy. M. Meyer.—p. 293.
Bactericidal Action of Infant Blood. H. Langer and Kyrklund.—p. 302.
Mesentery Anomalies and Hirschsprung's Disease. F. Goebel.—p. 323.
Etiology of Mongolism. A. Dollinger.—p. 332.

Jaundice in the Newborn.—Schick explains that the mother's blood passing into the fetus, and there disintegrating, is responsible for the icterus neonatorum. It is thus a symptom of a physiologic process. Wagner's research has confirmed Schick's theory, but supplements it by showing that the destruction of the maternal blood proceeds mainly in the placenta. After birth, the spleen and the rest of the reticuloendothelial system assume the task. The placenta contains relatively much more iron at a premature birth than at term, and jaundice is almost inevitable in the prematurely born. Both articles issue from Pirquet's and Thaler's services.

Action of Calcium on the Vegetative Nervous System.—Usener tabulates the findings in groups of children given calcium chlorid plus pilocarpin or atropin or epinephrin. Experimental research is also reported, and the effect of calcium chlorid on alimentary glycosuria, on the composition of the cerebrospinal fluid, etc. The data presented show among other things that calcium seems to inhibit the action of those nerve elements which are responsible for hyperglycosuria under the influence of epinephrin, as well as pathologic glycosuria from central hyperglycemia. Alimentary glycosuria is not modified by it. Central and liver hyperglycemia and its corresponding glycosuria are influenced by the calcium, which seems to check the functioning of both the vagus and sympathetic nervous systems. He suggests that it may be possible to distinguish by the effect of calcium between central and alimentary glycosuria, and, in diabetes, to eliminate by this means the central components of the diabetes when such exist.

Pyknolepsy.—Meyer refers to recurring mild attacks in children which resemble the petit mal of epilepsy but which are not of epileptic nature, as the children finally outgrow them without mental impairment, and none of the usual measures for treatment of epilepsy have any effect. There is a brief, slight disturbance in consciousness for ten or twenty seconds; the eyeballs roll up and the knees may give way. He has had four patients with this pyknolepsy, all girls between 7 and 12, with an inherited nervous taint but no epilepsy in the family, and there was no evidence of spasmophilia. One of the children had up to thirty attacks a day, and slight jerking was noted in one case, and urine sometimes escaped during the attack. The children were bright and lively, with nothing to suggest hysteria. Under treatment with calcium lactate up to 6 gm. a day, with 0.03 to 0.05 gm. phenobarbital six times a day, improvement was observed amounting to a complete cure in three months in one of the cases, but in two of the cases no benefit was apparent. The attacks first appeared as the child began to attend school, and fatigue may possibly be a factor in their production. The pulse was unstable and the reflexes exaggerated in these pyknoleptic children.

Zeitschrift für Tuberkulose, Leipzig

February, 1921, 33, No. 4

Unfavorable Experiences with Friedmann's Treatment of Tuberculosis. W. Unverricht.—p. 193.
*War and Tuberculosis. W. Schmid.—p. 206.
*Relations Between Catarrhal Colds and Tuberculosis. Warnecke.—p. 220.
Fatal Hematemesis in Miliary Tuberculosis. E. Als.—p. 231.

War and Tuberculosis.—Schmid remarks that among the prejudices banished by the war is the one that only the "predisposed" contract tuberculosis. Zadek and Hayek found that among 2,400 tuberculous soldiers examined, and Schmid in 143, that the severer forms were encountered among the previously healthy men, and the mild forms among the men

with a tuberculous taint before the war. The latter group seemed to have the prognosis favorably modified by the vicissitudes of the war. The nonpredisposed were thus the ones that displayed the greatest predisposition to severe tuberculosis. Those that had been in contact with tuberculosis before the war were in a condition of preparedness; they responded readily with production of antibodies to any new invasion of tubercle bacilli from without or from latent foci within the body. Those that used to be called the "predisposed to tuberculosis" are in fact already chronic cases of long standing.

Catarrhal Colds in Relation to Tuberculosis. — Warnecke explains how recurring catarrhal colds are liable to prepare the mucous membranes and lymph glands for tuberculosis, or rouse a latent into an active tuberculous process, or transform a closed into an open case. It must be borne in mind, he reiterates, that the tuberculous are peculiarly sensitive to "catching cold," both on account of their constitutional inferiority and of the frequent toxic action of the disease on the nervous apparatus.

Zentralblatt für Chirurgie, Leipzig

March 26, 1921, 48, No. 12

*Intraspinal Injections of Air in Diagnosis. S. Wideröe.—p. 394.
*Operative Lengthening of Lower Leg. H. Hartleib.—p. 397.
*Etiology of Peculiar Type of Volvulus. K. Fritsch.—p. 401.
Division of the Rectus in Laparotomies (a Reply). Drüner.—p. 404.
Chronic Ileus After Anterior Gastro-Enterostomy. E. Stark.—p. 405.
Sterilization of Silk Thread for Sutures. E. Wilhelm.—p. 406.
*Reduction of Suprarenal Substance in Epilepsy. H. Peiper.—p. 407.

Diagnostic Significance of Intraspinal Injections of Air in Disease of the Spinal Cord.—Wideröe (Christiania) refers to intraspinal injection of air as first carried out by Dandy of Baltimore, in 1919, in eight cases of brain disease to locate the disease process. Wideröe has tried Dandy's technic with slight modifications in eleven cases of various diseases of the central nervous system—the first attempt to use the method in affections of the cord. He has found localization of tumors of the spinal cord occasionally very difficult, and in one particularly difficult case the intraspinal injections proved very useful in locating a tumor in the region of the seventh cervical vertebra.

In four cases of a hydrocephalous nature, the intraspinal injections produced no phenomena. In another group of four cases, they caused tinnitus and headache; the diagnosis in these cases was a syphilitic cerebral affection without hydrocephalus. In the two cases in a third group one patient with paresis felt after each injection of air radiating pains in both legs; the other patient (epilepsy with hysterical symptoms), radiating pain throughout the whole back. If the vertebral canal is narrow, whether for pathologic or physiologic reasons, the air presses on the sensory nerves and the patient feels pain. Whether this is characteristic of epilepsy remains to be seen. In Group 4 there was only the one patient with the tumor of the spinal cord. In her case the pains came on in periodic attacks a few hours after the injections.

Operative Lengthening of Leg. — Hartleib describes with illustrations his operation at one sitting for lengthening the lower leg in two patients aged 18 and 27, saying that a comfortable gait is not possible if the shortening amounts to more than 4 cm. A raised shoe is only a makeshift. In one of his cases the shortening of 5 cm. was corrected by mobilizing the overlapping stumps of the fistula and tibia and applying strong continuous traction. The nerves and muscles did not seem to suffer from this. The stumps were held with an aluminum plate which healed in place without reaction. The leg in the other patient, a woman, was 12 cm. short, and he was able to lengthen it only by 3 cm., but by raising the sole 5 cm. the limb is now only 4 cm. short, and crutches and cane have been discarded.

Volvulus of Kinked Intestinal Loop.—Fritsch discovered in two different operations for "Wringverschluss" marked changes of the mesentery in the region of the torsion. Cicatricial thickening and old adhesions had probably interfered with peristalsis; there was no fixation of the loop. The ileus had developed slowly and was very grave, both patients succumbing in about twelve hours after the operation.

Unilateral Suprarenalectomy in Treatment of Epilepsy.—Peiper reports that in seven cases of epilepsy one suprarenal gland was removed. Brüning's transperitoneal method was followed in each instance. The seizures either ceased at once or the status epilepticus quickly disappeared following the operation, but, unfortunately, recurrences soon set in. Unless he learns of marked success with the method from other sources, Peiper has decided not to perform the operation further. He admits, however, that the operation may be more successful in older patients (his patients ranged from 6 to 24 years of age), as hypertrophy of the remaining suprarenal gland is more likely to occur in the young.

Zentralblatt für Gynäkologie, Leipzig

March 26, 1921, 45, No. 12

Treatment of Febrile Abortion. W. Latzko.—p. 425; Idem. J. Halban. —p. 439.

Nederlandsch Tijdschrift v. Geneeskunde, Amsterdam

Jan. 8, 1921, 1, No. 2

*Syphilitic Origin of Exophthalmic Goiter. J. H. Roorda Smit.—p. 156.
*Operative Treatment of Spondylitis. T. A. Jagerink.—p. 159.
*Trauma and Tuberculosis. R. Korteweg.—p. 164.
The Untenableness of Monism. J. J. de Casparis.—p. 168.
Postdiphtheric Polyneuritis in Young Man. L. Bouwmeester.—p. 174.
*Ascending Neuritis. G. C. Bolten.—p. 181.

Syphilitic Origin of Exophthalmic Goiter. — Smit relates two cases of exophthalmic goiter in which a cure was realized under treatment as for syphilis. The success in both confirms that syphilis may be responsible for toxic thyroiditis in certain cases. His patients were women of 34 and 52 with typical toxic thyroiditis, insomnia, etc., pulse rate 140, blood pressure 60 and 140, and sluggish pupil reactions. Marked improvement was realized by the fifth day. The teeth of the younger woman suggested inherited syphilis. The deafness in one ear in the older woman was cured also by the treatment.

Operative Treatment of Spondylitis. — Jagerink reviews twenty cases in which he applied Albee's technic with excellent results.

Trauma and Tuberculosis.—Korteweg is making an official investigation of this subject and appeals to the profession to aid him in this task. Acute miliary tuberculosis, especially in the form of meningitis, is the most instructive for this purpose, and he charts the cases he has compiled in which death occurred within six weeks of the trauma. In 30 cases of tuberculous meningitis, the trauma had been an operation; in all but 3 for a tuberculous process. In 19 cases there had been a fall or blow on the head; in 5 a fall not affecting the head; a violent shock in 3, and in one case there had been only extreme fright for half an hour. His chart shows that the trauma cannot be incriminated for a death from tuberculous meningitis or miliary tuberculosis occurring in less than fourteen days afterward. In the 14 cases of miliary tuberculosis, the trauma had been an operation in 4; fall into water in 1 case; fall from a height in 5, and abortion in 4. The connection between trauma and acute tuberculosis has long rendered surgeons extra wary in operating on the tuberculous, but Korteweg's chart emphasizes further that this connection is manifested also in the duration of the disease, the fifteenth day showing the beginning of the fatalities, and the number runs up high. At the twenty-seventh day it drops abruptly again.

Ascending Neuritis.—Bolten regards it as scarcely probable that a neuritis can climb upward. He describes what seemed to be a typical case, but it proved to be a tuberculous ascending lymphangitis, involving nerves.

Acta Medica Scandinavica, Stockholm

Nov. 27, 1920, 54, No. 2

*Peritonitis in Typhoid. N. Svartz and R. Hanson.—p. 97.
*The Meningeal Reaction in Poliomyelitis. A. Wallgren.—p. 117.
*Acute Leukemia in Pregnancy. A. Wallgren.—p. 133.
*Migration of Fat. H. C. Geelmuyden.—p. 147. Begun in No. 1, p. 51.
*The Planes Sign. G. Söderbergh.—p. 164.
*Motor Disturbances after Zona. G. Söderbergh.—p. 170.
*Motor Disturbances after Spondylitis. A. Barkman.—p. 183.

Peritonitis in Typhoid Without Perforation.—The diffuse purulent peritonitis developed apparently from spread of the inflammation through the bowel wall, as no trace of perforation or of gas could be discovered, no fecal odor, no

colon bacilli and no signs of injury of other viscera in the woman of 26. In the forty or fifty cases on record the peritonitis was purulent in only 10. About 25 per cent. of the patients recovered after operative treatment. Typhoid bacilli were demonstrated in the peritoneal effusion in 4 cases.

The Meningeal Reaction with Acute Poliomyelitis.—Wallgren tabulates the findings in the spinal fluid in 58 cases of poliomyelitis, in 95 of epidemic and in 34 of tuberculous meningitis. The data presented show that lymphocytosis in the spinal fluid with stiffness of the neck but without Kernig's sign seems to be characteristic of poliomyelitis in adults. The different location of the lesions explains this lack of concordance between the neck sign and the Kernig sign.

Acute Leukemia in Pregnancy.—The woman of 29 died from acute leukemia twenty-five days after delivery of a macerated but nonleukemic infant. He has found only three cases of the kind on record, all in women between 24 and 37, and all fatal. No signs of leukemia could be discovered in the infants and one survived. That infants are liable to have leukemia is shown by two cases of fatal leukemia cited, developing almost at once after birth.

Migration of Fat.—Summarized, May 7, p. 1328.

The Pianos Sign of Cerebellum Disease.—Söderbergh found in three cases of cerebellar disease that the arms extended horizontally bent involuntarily rhythmically at the elbow, or twisted to and fro, when the arms were in certain planes and not in others. The movements were most pronounced in the extreme adduction plane.

Abdominal Syndrome with Intercostal Herpes.—In this eleventh communication Söderbergh discusses the motor disturbances left by zona in ten of fifteen cases. Their segmental localization, the rotation of the umbilicus and the paresis and atrophy of muscles are shown in a chart in connection with the site the herpes zoster had occupied.

Traumatic Spondylitis.—Atrophy and paresis of certain muscles may follow traumatic spondylitis. The segmental arrangement of the motor and trophic disturbances and of the "rheumatic" pains corresponded to the vertebrae involved in the trauma in the three cases described.

Hospitalstidende, Copenhagen

Feb. 16, 1921, 64, No. 7

*Quantitative Tests for Diabetic Urine. M. Claudius.—p. 97.

March 16, 1921, 64, No. 11

The Modern Conceptions of Heredity. W. Johannsen.—p. 161.

Quantitative Tests for Diabetic Urine.—Claudius describes a quantitative method for determination of the acetone, acetoacetic acid, beta-oxybutyric acid and dextrose in diabetic urine. The principle is the oxygenation of the substances with iodic acid in a solution of sulphuric acid. The amount of sulphuric acid required differs for each of these different substances. The oxidation occurs on the water bath at the boiling point; as the iodic acid yields oxygen it releases a corresponding amount of iodin, and this amount is determined in the usual way by titration with a solution of thiosulphate.

Hygiea, Stockholm

Feb. 14, 1921, 83, No. 3

Diagnosis of Disease in Otolith Apparatus. R. Bárány.—p. 81.
Access to Brain Stem at Necropsy. I. Syk.—p. 84.

Norsk Magazin for Lægevidenskaben, Christiania

April, 1921, 82, No. 4

*Treatment of Diabetes. K. Motzfeldt.—p. 249.
*Medicine in Ancient Egypt. B. Ebbell.—p. 285.
*Prevalence of Tuberculosis in Children. F. Hamburger.—p. 294.
*Retroperitoneal Cyst. N. Paus.—p. 313.
*Acute Appendicitis in the Elderly. N. Paus.—p. 315.
*Perforated Ulcer. N. Paus.—p. 318.
Schlatter's Disease. N. Paus.—p. 320.
Postoperative Fatalities. N. Paus and M. Lorange.—p. 322.
Tests of Blood Before Transfusion. F. Jervell.—p. 329.

Treatment of Diabetes.—Motzfeldt has been applying undernutrition in treatment of diabetes for more than three years and reports extremely favorable results. He tabulates the outcome in 54 cases before 1917 treated on other principles. There were 13 per cent. deaths and only 44 per cent. were free from glycosuria and ketonuria at the close of the course. The corresponding figures under more or less rigorous starvation treatment were 5 per cent. deaths and 79 per cent. with normal urine when discharged from the hospital. One boy of 12 was in diabetic coma three weeks after the onset of the first symptoms. In earlier days this would have been classed as a case of acutely fatal diabetes, but under seven months of treatment he was dismissed in good condition with urine and blood sugar normal. Motzfeldt's experience has confirmed the value of the preliminary test for acidosis by the time that the breath can be held.

Medicine in Ancient Egypt.—Ebbell describes the five more important papyri found in ancient Egypt and comments on the various prescriptions found in them and the repetition of these prescriptions in the later Greek works. Night blindness and alopecia he discusses in detail. The Ebers Papyrus, written 1550 B. C., contains prescriptions for the cure of falling of the hair. The first recommends porcupine quills for the purpose, to be burnt and mixed into a salve with fat for local application. The word translated "alopecia" seems to be the same as one used in ancient Hebrew for the same purpose. If this actually represents alopecia, as supposed, the first description of the disease is found in the third book of Moses, instead of in Celsus, as generally taught. The oldest prescription for its treatment is in the Ebers Papyrus. Ebbell adds in conclusion that it is a pity that the old Egyptian remedy of porcupine quills has gone out of use, because it seems to be as rational and as effectual as the treatments that have been in vogue in modern times.

Prevalence of Tuberculosis in Children.—Hamburger urges in seeking to determine the prevalence of tuberculosis in children, that children in schools and contagious disease hospitals should be selected, not child patients in dispensaries. The test should be with the skin and percutaneous technic and, with negative results, a subcutaneous test. Only in this way will it be possible to estimate clearly the prevalence of the disease in children at large.

Retroperitoneal Cyst.—Smooth recovery followed evacuation of 6 liters of fluid from the retroperitoneal cyst in the woman of 35.

Acute Appendicitis in the Elderly.—Only one died of Paus' five patients between 57 and 70, operated on for acute appendicitis..

Perforated Ulcer.—The first of the two patients was a woman of 72 and she has been in good health for over a year since resection of the stomach for a perforated ulcer. There had been symptoms from the ulcer for two years and she was much debilitated.

Ugeskrift for Læger, Copenhagen

April 7, 1921, 83, No. 14

*Film Treatment in Dermatology. A. Kissmeyer.—p. 475.
Treatment of Scabies. E. Ehlers.—p. 480.

Film Treatment in Dermatology.—Kissmeyer was much impressed with the fine results of paraffin film treatment of burns and for a year or so he has been applying this same method in treatment of skin diseases at the Finsen Light Institute at Copenhagen. The experiences with 84 patients were extremely favorable, especially in eczema and pruritus. In 10 cases of leg ulcer, 3 very old ulcerations healed in less than a month and the others in two weeks, except those that are still under treatment. The film seems to induce rapid growth of the epithelium. In his 23 cases of eczema some had been treated for years with all other measures without results, but they healed promptly under the paraffin film. Eczema with fissures in the inguinal region and anus had been exceedingly troublesome for several years in one man of 32 but it healed completely in thirty-six days under the film treatment. Neurodermatitis and prurigo also subsided under it and likewise roentgen burns. He experimented with various films and found most effectual a mixture of 1 part benzoin; 5 parts caoutchouc, and 100 parts neutral paraffin with melting point at 52 C. Infected ulcers have to be cleansed first; he dries them afterward with a jet of hot air. This treatment is not always effectual, but it never failed promptly to reduce the itching.

THE BOSTON SESSION

AMERICAN MEDICAL ASSOCIATION, SEVENTY-SECOND ANNUAL SESSION
BOSTON, JUNE 6-10, 1921

OFFICIAL CALL

TO THE OFFICERS, FELLOWS AND MEMBERS OF THE AMERICAN MEDICAL ASSOCIATION

The seventy-second annual session of the American Medical Association will be held in Boston, Mass., June 6-10, 1921.

The House of Delegates will convene at 10 a. m., Monday, June 6. In the House the representation of the various constituent associations for 1921 is as follows:

Alabama	3	New Hampshire	1
Arizona	1	New Jersey	3
Arkansas	2	New Mexico	1
California	3	New York	11
Colorado	2	North Carolina	2
Connecticut	2	North Dakota	1
Delaware	1	Ohio	6
District of Columbia	1	Oklahoma	2
Florida	1	Oregon	1
Georgia	2	Pennsylvania	9
Idaho	1	Rhode Island	1
Illinois	8	South Carolina	1
Indiana	3	South Dakota	1
Iowa	3	Tennessee	2
Kansas	3	Texas	5
Kentucky	3	Utah	1
Louisiana	2	Vermont	1
Maine	1	Virginia	3
Maryland	2	Washington	2
Massachusetts	5	West Virginia	2
Michigan	4	Wisconsin	3
Minnesota	2	Wyoming	1
Mississippi	1	Canal Zone	1
Missouri	5	Hawaii	1
Montana	1	Philippine Islands	1
Nebraska	2	Porto Rico	1
Nevada	1		

The fifteen scientific sections of the American Medical Association, the Medical Department of the Army, the Medical Corps of the Navy and the Public Health Service are entitled to one delegate each.

The Scientific Assembly of the Association will open with the general meeting to be held at 8:30 p. m., Tuesday, June 7. The Sections will meet Wednesday, Thursday, and Friday, June 8, 9 and 10, as follows:

CONVENING AT 9 A. M. THE SECTIONS ON

- Practice of Medicine
- Obstetrics, Gynecology and Abdominal Surgery
- Laryngology, Otology and Rhinology
- Pathology and Physiology
- Stomatology
- Nervous and Mental Diseases
- Urology
- Preventive Medicine and Public Health

CONVENING AT 2 P. M. THE SECTIONS ON

- Surgery, General and Abdominal
- Ophthalmology
- Diseases of Children
- Pharmacology and Therapeutics
- Dermatology and Syphilology
- Orthopedic Surgery
- Gastro-Enterology and Proctology
- Miscellaneous

The Registration Department will be open from 8:30 a. m. until 5:30 p. m., on Monday, Tuesday, Wednesday and Thursday, June 6, 7, 8 and 9, and from 8:30 a. m. to 12 noon, on Friday, June 10.

WILLIAM C. BRAISTED, President.

DWIGHT H. MURRAY, Speaker, House of Delegates.

ALEXANDER R. CRAIG, Secretary.

MEMBERS OF THE HOUSE OF DELEGATES

A Preliminary Roster of the Legislative Body of the American Medical Association

The list of members of the House of Delegates for the session is incomplete, as a number of the state associations are yet to hold their meetings at which delegates will be elected. The following is a list of the holdover delegates and of the newly elected members (indicated by *) who have reported to THE JOURNAL in time to be included:

STATE DELEGATES

ALABAMA
F. W. Wilkerson, Montgomery.
*S. W. Welch, Montgomery.
*J. D. Heacock, Birmingham.

ARIZONA
*D. F. Harbridge, Phoenix.

ARKANSAS
George S. Brown, Conway.
William R. Bathurst, Little Rock.

CALIFORNIA
H. Bert Ellis, Los Angeles.
Albert Soiland, Los Angeles.

COLORADO
Gerald B. Webb, Colorado Springs.
*J. N. Hall, Denver.

CONNECTICUT
John E. Lane, New Haven.

DELAWARE
*H. J. Stubbs, Wilmington.

DISTRICT OF COLUMBIA
William Gerry Morgan, Washington.

FLORIDA

GEORGIA
W. C. Lyle, Atlanta.
E. G. Jones, Atlanta.

IDAHO

ILLINOIS
Charles J. Whalen, Chicago.
G. Henry Mundt, Chicago.
F. C. Sibley, Carmi.
T. O. Freeman, Mattoon.

INDIANA
George W. Spohn, Elkhart.
Albert E. Bulson, Jr., Fort Wayne.
*J. Rilus Eastman, Indianapolis.

IOWA
L. W. Dean, Iowa City.
W. L. Allen, Davenport.

KANSAS
Elmer E. Liggett, Oswego.
*James W. May, Kansas City.
*C. Klippel, Hutchinson.

KENTUCKY
W. W. Richmond, Clinton.

LOUISIANA
L. R. DeBuys, New Orleans.
*W. H. Seemann, New Orleans.

MAINE
Bertram L. Bryant, Bangor.

MARYLAND
Randolph Winslow, Baltimore.
*T. S. Cullen, Baltimore.

MASSACHUSETTS
J. F. Burnham, Lawrence.
H. G. Stetson, Greenfield.
C. E. Monagan, Somerville.
*F. B. Lund, Boston.
*E. F. Cody, New Bedford.

MICHIGAN
A. W. Hornbogen, Marquette.
Guy L. Connor, Detroit.
J. D. Brook, Grandville.
F. C. Warnshuis, Grand Rapids.

MINNESOTA
J. W. Bell, Minneapolis.
*W. H. Magie, Duluth.

MISSISSIPPI

MISSOURI
Franklin E. Murphy, Kansas City.
C. R. Woodson, St. Joseph.
S. L. Baysinger, Rolla.

MONTANA
E. W. Spottswood, Missoula.

NEBRASKA
LeRoy Crumner, Omaha.
*W. O. Bridges, Omaha.

NEVADA
M. R. Walker, Reno.

NEW HAMPSHIRE
D. E. Sullivan, Concord.

NEW JERSEY
George E. Reading, Woodbury.
H. H. Davis, Camden.
*Henry A. Colton, Trenton.

NEW MEXICO
*H. A. Miller, Clovis.

NEW YORK
E. Eliot Harris, New York City.
Eden V. Delpbey, New York City.
Edward Livingston Hunt, New York City.
Arthur J. Bedell, Albany.
J. Richard Kevin, Brooklyn.
Dwight H. Murray, Syracuse.

NORTH CAROLINA
J. O. Myers, Charlotte.
J. F. Highsmith, Fayetteville.

NORTH DAKOTA
E. A. Pray, Valley City.

OHIO
J. H. J. Upham, Columbus.
Ben R. McClellan, Xenia.
C. D. Selby, Toledo.
G. E. Follansbee, Cleveland.
Granville Warburton, Lanesville.
W. D. Haines, Cincinnati.

OKLAHOMA
L. S. Willour, McAlester.
*L. J. Moorman, Oklahoma City.

OREGON
*Joseph A. Pettit, Portland.

PENNSYLVANIA
William F. Bacon, York.
George R. S. Corson, Pottsville.
Herbert B. Gibby, Wilkes-Barre.
George G. Harman, Huntingdon.
Wilmer Krusen, Philadelphia.
*C. A. E. Codman, Philadelphia.
*John B. McAlister, Harrisburg.
*George A. Knowles, Philadelphia.
*John D. McLean, Philadelphia.

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RHODE ISLAND
Frederick T. Rogers, Providence.

SOUTH CAROLINA
*Edgar A. Hines, Seneca.

SOUTH DAKOTA
R. D. Alway, Aberdeen.

TENNESSEE
E. T. Newell, Chattanooga.
*L. A. Yarbrough, Covington.

TEXAS
E. H. Cary, Dallas.
J. Mark O'Farrell, Houston.

UTAH
*S. G. Kahn, Salt Lake City.

VERMONT
F. T. Kidder, Woodstock.

VIRGINIA
Ennion G. Williams, Richmond.
Southgate Leigh, Norfolk.

WASHINGTON
S. E. Lambert, Spokane.
*D. E. McGillivray, Post Angeles.

WEST VIRGINIA
Henry P. Linsz, Wheeling.
*James R. Bloss, Huntington.

WISCONSIN
Joseph F. Smith, Wausau.
*Rock Sleyster, Wauwatosa.
*Horace M. Brown, Milwaukee.

WYOMING
George P. Johnston, Cheyenne.

CANAL ZONE
Harry Eno, Christobal.

HAWAII

PHILIPPINE ISLANDS
Juan G. Mañagas, Baltimore.

PORTO RICO
Jacinto Aviles, San Juan.

UNITED STATES ARMY
Joseph S. Siler, Washington, D. C.

UNITED STATES NAVY
N. J. Blackwood, Boston.

U. S. P. H. SERVICE
J. W. Schereschewsky, Washington, D. C.

DELEGATES FROM THE SECTIONS

PRACTICE OF MEDICINE
James S. McLester, Birmingham, Ala.

SURGERY, GENERAL AND ABDOMINAL
R. P. Sullivan, New York.

OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY
Edward S. Reynolds, Boston.

OPHTHALMOLOGY
Lee M. Francis, Buffalo.

LARYNGOLOGY, OTOLOGY AND RHINOLOGY
John F. Barnhill, Indianapolis.

DISEASES OF CHILDREN
I. A. Abt, Chicago.

PHARMACOLOGY AND THERAPEUTICS
Robert A. Hatcher, New York.

PATHOLOGY AND PHYSIOLOGY
James Ewing, New York.

STOMATOLOGY
Eugene S. Talbot, Chicago.

NERVOUS AND MENTAL DISEASES
E. W. Taylor, Boston.

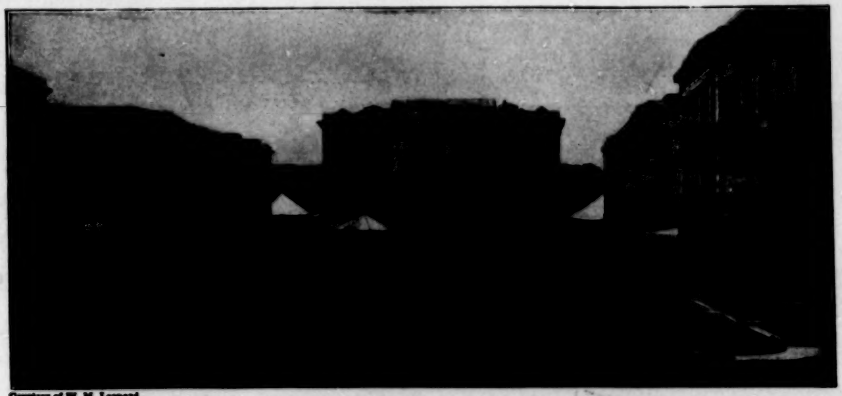
DERMATOLOGY AND SYPHILOLOGY
Howard Fox, New York City.

PREVENTIVE MEDICINE AND PUBLIC HEALTH
James A. Hayne, Columbia, S. C.

UROLOGY
E. O. Smith, Cincinnati.

ORTHOPEDIC SURGERY
John Ridlon, Chicago.

GASTRO-ENTEROLOGY AND PROCTOLOGY
Alois B. Graham, Indianapolis.



Courtesy of W. M. Leonard

RECEPTION AT THE BOSTON SESSION, 1906. HARVARD MEDICAL SCHOOL
Meeting Place, in 1921, of Sections on Pharmacology and Therapeutics; Pathology and Physiology; Preventive Medicine and Public Health, and Gastro-Enterology and Proctology

BOSTON—A RETROSPECT

PREVIOUS SESSIONS IN BOSTON

As the American Medical Association is to hold its next annual session in Boston it will be of interest to glance back at the previous sessions in that city. The second annual session of the Association was held in the Lowell Institute, Boston, May 1, 1849, under the presidency of Dr. Alexander Hodgdon Stevens of New York. At this meeting Dr. John Collins Warren of Boston delivered the address of welcome on behalf of the Committee of Reception of the Massachusetts Medical Society. On the following day he was elected as the third president of the Association. The attendance was 658, including a long list of noted men. Dr. Alfred Stillé of Philadelphia and Dr. Henry Ingersoll Bowditch of Boston were elected secretaries. The next meeting in Boston was held June 6-9, 1865, only two months after Lee's surrender at Appomattox. The general meeting was held in the State House on Beacon Hill, Dr. N. S. Davis of Illinois presiding and Dr. Henry J. Bigelow of Boston delivering the address of welcome as chairman of the local committee of arrangements. The attendance was not large as the war was only just over and facilities for travel were limited; moreover the South did not care to visit the North at that time, so practically all those in attendance, 616, were from the eastern states. Governor John A. Andrew addressed the Association on June 9; D. Humphreys Storer of Boston was elected president on the last day. The problems confronting the Association were much the same at both of these early sessions, namely, medical education, medical licensure, and the purity and integrity of the drugs offered to physicians by manufacturers and dealers.

The third meeting in Boston was June 5-8, 1906, the opening session being held in Grand Hall in the Mechanics Building. Six thousand were present, with Dr. William J. Mayo of Rochester, Minn., as president. The House of Delegates met in the Boston Medical Library Building on the Fenway, then only five years old, while the sections were housed in various halls on Huntington Avenue, and in Tufts College Medical School and Harvard Medical School. There was a commercial exhibit in Mechanics Building, and a restaurant in Symphony Hall. At the first general meeting, June 5, there were addresses of welcome by Gov. Curtis Guild, Pres. Charles W. Eliot of Harvard, Dr. Arthur T. Cabot, president of the Massachusetts Medical Society, John F. Fitzgerald, mayor of Boston, and Dr. Herbert L. Burrell, chairman of the Committee of Arrangements. At the second general meeting in Jordan Hall, on the evening of the same day, Dr. Frederick C. Shattuck of Boston gave the oration in medicine, and Dr. Joseph D. Bryant of New York the oration in surgery. The oration

on state medicine was delivered at the third general meeting in Jordan Hall on the evening of June 6, by Dr. W. H. Sanders of Montgomery, Ala. Dr. Joseph D. Bryant of New York was elected president, and Dr. Herbert L. Burrell of Boston first vice president. It was estimated that 15,000 visitors came to Boston for this session, the registration being 4,722, altogether the largest in the history of the Association at that time.

HISTORIC BOSTON

Through Boston passes annually a great concourse of summer visitors to the coast resorts of Massachusetts and Maine, and to the legion of hotels, boarding houses and private residences of the White Mountains. Marblehead is the greatest yachting rendezvous on the Atlantic seaboard; and Beverly Shore has long been famous for its equability of climate. Here the woods meet the water on rocky ledges, and the prevailing southwest breeze sweeps across Massachusetts Bay tempering the summer heat. The Maine coast, with its many indentations and its myriads of islands, is sure to provide a cool resting place during the heated term, and Cape Cod, stretching a long arm into old ocean, is seldom without a cooling wind.

COMING OF THE PILGRIMS

There, 300 years ago, the Pilgrims landed in search of a home where they might as Separatists from the established church of England worship God according to their customs. It was in November, 1620, that they first stepped ashore at Provincetown from the *Mayflower*, after a long and stormy voyage from England, having missed their original destination, through the exigencies of the weather, in territory that is now New Jersey. The vessel was of only 180 tons, and carried a total of 130 souls. While off Provincetown at the tip of the cape, the famous "Mayflower Compact" was signed in the cabin, for in not arriving at the Virginia plantation they had forfeited their Virginia patent and the authority which it vested in their leaders. The compact was signed November 11. It recited that the loyal subjects of "our dread soveraigne Lord, King James, by ye grace of God, of Great Britaine, Franc. & Ireland king, defender of ye faith, &c, haveing undertaken, for ye glorie of God, and advancemente of ye Christian faith, and honour of our king and countrie, a voyage to plant ye first colonie in ye Northerne parts of Virginia, doe by these presents solemnly & mutually in ye presence of God, and one of another, covenant & combine our selves togeather into a civill body politick, for our better ordering & preservation & furtherance of ye ends aforesaid; and by vertue hearof to enacte, constitute, and frame such just & equall lawes, ordinances, acts, constitutions, & offices, from time to time, as shall be thought most meete & convenient for ye generall good of ye Colonie, unto which we promise all due submission and obedience."

The morning after the signing of the compact, Capt. Myles Standish and sixteen men made the first landing on New England soil. Then in the ship's boat he undertook an exploration of the coast, finally selecting the future Plymouth as a suitable place for a settlement; and there the historic landing on Plymouth Rock was made on Dec. 21, 1620. Five days later the Mayflower sailed into the harbor, and the voyage, begun September 16, from Plymouth, England, was ended.

There began a new era in America's great experiment. The colonists were men of determination and strong faith. Peaceful, industrious, just, reverent, they enacted fundamental laws which today control our great country. To them we owe the first law for trial by jury, a part of the English common law, and from the same source came our laws for the registry of lands, on taxation, and for an equitable distribution of property among widows and children.

BOSTON MEDICAL LIBRARY
Meeting Place of House of Delegates

HOLMES HALL, BOSTON MEDICAL LIBRARY

LEADERS IN THE COLONY

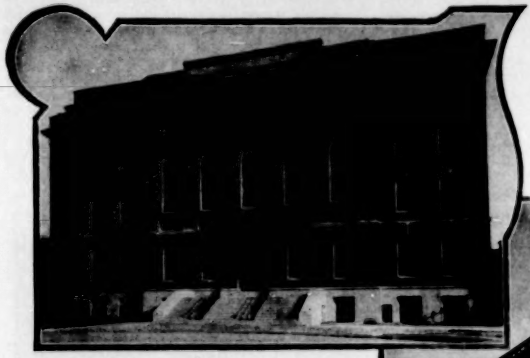
The first winter they built cabins, laid out a street, called Leyden, from their former dwelling place in Holland, and did their best to withstand the rigors of a more inclement climate than their Virginia outfit had provided for. Affairs were conducted by William Bradford, William Brewster, Edward Winslow, Myles Standish, and Isaac Allerton, Brewster being ruling elder, Bradford, governor, after Carver died in 1621, and Standish, captain. Bradford's History of the Plymouth Plantation, from 1620 to 1648, has been preserved in manuscript in the state library. It has been printed several times, furnishing the most authentic account of the beginnings of civilization in New England. More than half of these brave souls died the first winter; none sailed home on the *Mayflower*. The graves of those buried were plowed over so that the Indians might not know how few were the survivors. In the fall of 1621 another ship came from England with about thirty-seven more settlers, and from that time the community began to prosper. However, it never increased in numbers proportionately to Boston, to the north, which was settled by Puritans from other parts of England.

COMMUNISTIC EXPERIMENTS

The Pilgrim colonists began the first communistic experiment in the country when they agreed that "all profits and benefits gotten by trade, traffic, working, or any other means, or any other person, or persons, shall remain in the common stock." This arrangement was to last seven years. Alas, such a complete form of social brotherhood took little thought

of human characteristics. There were drones among even those public-spirited and conscientious people; the stimulus of self-interest and family affection was needful for the existence of the community, so that by the spring of 1623 the settlement was like to go to pieces when it became apparent that nothing but a good harvest could save it from starvation. Thereupon each man was given a small piece of corn-growing land for himself, and the trial scheme was at an end.

John Winthrop, with his company of Puritans, arrived at Salem in 1629, and the same year a part of the company settled at Charlestown, across the harbor from Trimount, or the three-hilled peninsula which in the following year was to receive the name of Boston, after Boston in Lincolnshire.



MOSELY (ADMINISTRATION) BUILDING, MASSACHUSETTS GENERAL HOSPITAL

The Court of Assistants, sitting in Charlestown, voted this, so the chief settlement was transferred across the water to land where springs abounded. In this same year, 1630, came the *Mary and John* to Nantasket Roads, with settlers from Devonshire and Somersetshire, for Dorchester and Roxbury, later to become parts of the city of Boston. By the end of the year there had arrived seventeen ships, bearing over a thousand passengers; and during the next ten years the colony was augmented by some twenty-five thousand settlers. From this time on for over a century there was little immigration, the inhabitants being descendants of the first immigrants. In this fact we have an explanation as to why the characteristics of both Pilgrims and Puritans became so firmly fixed and exerted such a powerful influence on the subsequent history of the entire country; for in the course of time the succeeding generations spread over the land, before the great admixture with other races had begun. In making new settlements away from the seaboard, they established their own customs and laws.

PERSONAL CHARACTERISTICS

The Puritan fathers had their faults, which they confessed humbly; but they were not affable—they frowned more than they smiled and punished rather than praised; they were better encountered in the spirit at a distance of three centuries than lived with in the flesh. Nevertheless, although the fathers went about with faces that were much too long, the Puritan mothers at least did not walk the streets with dresses that were much too short. The men had a way of talking through their noses, but we may be sure the maidens did not blow cigaret smoke through their nostrils. The Puritans neither danced nor gambled; their descendants . . . but enough has been said.

EDUCATION

The history of Boston's progress is a story of her dominant influence in New England from her settling to the present day. The Puritans were pioneers in popular education. In 1636 the general court appropriated the sum of 400 pounds toward the establishment of a college at Newtowne, now Cambridge. This is said to be the first instance of the people giving voluntarily of their funds to found an educational institution. Two years later, John Harvard of Charlestown, bequeathed half his estate and his library to this college. In 1647 a law was passed requiring each town of fifty householders to "appoint one within their town to teach all such children as shall resort to them to read and write"; and any town with one hundred families was required to set up a grammar school for the instruction of youths to be "fitted for the university." Long before this, April 13, 1635, by vote of the Town Meeting, Philemon Pormort had been "intreated to become schoolmaster, for the teaching and nourturing of children with us." This was the origin of the Public Latin School, in active operation today. The free schools always were on a democratic basis, not controlled by the clergy, as were many early activities of the colony.

PHILLIPS HOUSE, PRIVATE WARD OF MASSACHUSETTS GENERAL HOSPITAL

INDUSTRIES

Governor Winthrop built the first Massachusetts sea-going vessel, "The Blessing of the Bay," a bark of about sixty tons, at his farm called "Ten Hills," at Medford on the Mystic river. It was launched July 4, 1631, and it was used in coastwise and West India trade. The first ship built in Boston (1642) was the "Trial," of two hundred tons. She made voyages to Fayal with pipe staves and fish, and to Spain, bringing back wine, fruit, oil, iron and wool. From the first fish was the staple commodity for barter with foreign ports. The fisheries were always the principal commercial resource of the colonies, and they were carefully promoted by the government. The industry constantly increased in value, by 1716 the exports of codfish from Massachusetts amounting to 120,384 quintals.

Just previous to the Revolution (1769) it was estimated that upward of four hundred vessels were constantly employed in the fishery, whose annual profits of over 160,000 pounds sterling were remitted to meet the cost of imports from Great Britain. Today Boston is the greatest fishing port in the world. During the year 1920 there was received direct from the fishing grounds 125,000,000 pounds of groundfish, much of it at the new Boston Fish Pier at South Boston.

Stephen Daye printed the first book extant in English North America, in Cambridge, in 1639. In 1692 the first permanent and successful printing press was established in Boston, and in 1704 the first newspaper in America, the *Boston Newsletter*, began an existence which lasted seventy-two years. Manufactures were begun within a comparatively short time after the settlement; there were sawmills, gristmills, glass works, tanneries, brickyards, and even an iron foundry, started by John Winthrop, Jr., at Lynn, in 1643. The shoe industry, always an important factor in Massachusetts, was in active operation before 1700; there was a cotton mill in Beverly in 1788, and a woolen mill at Byfield in 1794, while carpet weaving began at Worcester in 1804.

MEDICINE IN COLONIAL DAYS

Of medicine in Colonial days there is not much to say. According to the standards of today the physicians of the old world were none too highly enlightened in the practice of the art. Few crossed the ocean; therefore, in the new colony the inhabitants were forced to get along, for the most part, with the medical lore that the clergymen had acquired as supplementary to their theology. Samuel Fuller (1580-1633) came to Plymouth on the *Mayflower* as physician. It is not known what education he had, but he was put down on the roster as a physician, and he practiced medicine among the colonists for thirteen years with success and satisfaction to them. When death claimed him, his widow practiced midwifery with high repute. A clergyman-physician of those days was Giles Firmin (1615-1697), who ministered to the physical wants of the settlers at Ipswich, and was the earliest lecturer on anatomy, previous to sailing to England in 1644, where he devoted the remainer of his life to preaching and writing religious pamphlets, all the time practicing medicine as occasion offered. In later times there were Charles Chauncy and Leonard Hoar, presidents of Harvard College, skilled in medicine, and teachers of the art to their students, though trained chiefly in theology. Hoar was credited with being the first to propose the modern system of technical education by adding a workshop and a chemical laboratory to Harvard. John Clark (1588-1664) of Newbury, the first of a line of seven physicians of the same name, was said to have great skill in cutting of stone, having received a special diploma for this accomplishment. He maintained a large farm at Plymouth, where he imported and bred fine horses.

The introduction of inoculation for smallpox took place in Boston in 1721, through the efforts of the Rev. Cotton Mather and Zabdiel Boylston. Vaccination was introduced by Benjamin Waterhouse in 1799. These were important epochs in Boston's history, inaugurating procedures that were to be the means of saving many lives. Prominent names in the town's medical story are: William Aspinwall, Samuel Danforth, Aaron Dexter, James Jackson, James Lloyd, Isaac Rand, the Shattucks, David Humphreys Storer, John Ware, the Warrens, the Bigelows, and Jeffries Wyman.

THE REVOLUTION

The continued growth of the spirit of liberty in the colonies made it inevitable that the people should resist the attempt of the British government to impose duties on a commerce so vitally necessary to their progress and prosperity. The stage was set for the "Boston Tea Party" of Dec. 16, 1773, when the tea was thrown into Boston harbor, a defiant protest which resulted in the closing of the port of Boston by Parliament, June 1, 1774. The irritation of the people had been fostered by the armed forces that were kept in and about the city, and by the ships of war in the harbor. The spark which set off the flame of the Revolution was provided by an attempt of the British to capture the military stores and supplies gathered at Concord. The date was April 19, 1775. Paul Revere's famous ride on the previous night served to awaken the inhabitants along the route that was to be taken by the troops. The war was begun on Lexington Common and continued a few hours later at Concord bridge. At Lexington Dr. William Aspinwall conducted himself with distinction as a volunteer and bore from the field the body of Captain Isaac Gardner, commander of the Brookline company. Very soon volunteer reinforcements for the militia began to come into the district from all over New England, and before long from the more distant colonies. On the night of June 16, the Continentals threw up redoubts on Bunker Hill in Charlestown, and the next day the battle was fought in which the British came off victorious. Gen. Israel Putnam and Col. William Prescott were in command of the Continental forces, and Dr. Joseph Warren, a volunteer, though recently made a major-general, was killed near the end of the battle. Washington was appointed commander-in-chief by Congress, taking command of the army at Cambridge, on July 2, 1775, as eastern Massachusetts was then the scene of the conflict. Fortifications were erected on the various hills and points of vantage in the vicinity of Boston, and, finally, on March 16, 1776, Washington fortified Dorchester Heights, now South Boston. The next day the British forces were obliged to evacuate the town, and the fleet sailed out of the harbor.

The remainder of the war was fought in New York, New Jersey, Pennsylvania and the South.

BOSTON CITY HOSPITAL

Some of the hospital surgeons of the Revolution from New England may be mentioned. John Warren did valuable service throughout the war; William Eustis was at Bunker Hill and went with Washington's army; Isaac Foster and his apprentice, Josiah Bartlett of Charlestown, helped to organize the medical department; William Aspinwall was in charge of the Jamaica Plain hospitals, as was Lemuel Hayward; James Thacher, the medical biographer, of Plymouth, was hospital mate and regimental surgeon, being present at West Point at the time of Arnold's treason, and at Cornwallis' surrender at Yorktown. In 1823 he wrote a most interesting and noteworthy book, his "Military Journal During the American Revolutionary War." Another physician-author was James Mann of Wrentham, who served three years in the medical corps, and, thirty years later, three years more in the war of 1812, writing "Medical Sketches" of the latter.

Although hampered with a large domestic and public debt, and by the war of 1812, the people of the Bay State soon entered on a long period of material progress. Industries of many kinds were established, large interior sections of the country were settled and developed; roads, canals and public improvements were put in operation. For several generations New England led the United States in shipbuilding as well as in coastwise and foreign commerce, the profits from which added to the wealth and prosperity of Boston. Before and for a long time after the Revolution, the statesmen of that city were among the foremost in the land. We have only to mention the names of the Adamses, Samuel, who organized the Revolution; John, president; John Quincy, president, ambassador and congressman; Charles Francis, our minister to Great Britain during the civil war; and Benjamin Franklin, wise in counsel both at home and abroad, to call to mind statesmanship that was of supreme importance to the republic in times of stress. Daniel Webster was born in New Hampshire and Edward Everett in Dorchester, while Rufus Choate came from Essex, that picturesque town where the trig schooner *Mayflower* has just been launched to maintain the supremacy of fast fishing boats against a Canadian competitor.

Boston has been prominent as a literary center. The most notable group of philosophers, essayists, poets and novelists the country has produced lived in and about the city, so that it got the sobriquet of the Hub. Familiar figures were Emerson, Longfellow, Holmes, Lowell, Hawthorne, Theodore Parker, William Ellery Channing, Francis Parkman, Edward Everett Hale, Thomas Bailey Aldrich, and W. H. Prescott. John Greenleaf Whittier lived in Haverhill, and Henry D. Thoreau in Concord. James T. Fields, the publisher, entertained the literary lights and talked of them. William Lloyd Garrison, Wendell Phillips, Charles Sumner and Frank Sanborn were much in evidence during and after the civil war. George Bancroft, John Fiske and Justin Winsor, eminent historians, and Phillips Brooks, the eloquent rector of Trinity Church, contributed to the distinction of this city, which holds a unique place in the history of our country.

PETER BENT BRIGHAM HOSPITAL

TRANSPORTATION

Special Railroad Fares

The Trunk Line Association acts for railroads within New York State (east of and including Buffalo, Niagara, Suspension Bridge and Salamanca), New Jersey, Pennsylvania (east of and including Erie, Oil City and Pittsburgh), Delaware, Maryland, Destrict of Columbia, Virginia and West Virginia (east of and including Wheeling, Parkersburg, Kenova, Orange and Norfolk).

This association has announced that there will be available for members of the American Medical Association who go to the Boston Annual Session a special rate for the round trip going and returning by the same route of one and one-half fares to the western gateway of the New England Passenger Association Territory, plus double the regular one way fare from that gateway to Boston. These special rate tickets will be sold only to members of the American Medical Association who present "identification certificates." One certificate will enable the member to purchase tickets for himself and for dependent members of his family. These tickets will be on sale from May 29 to June 5, inclusive. They must be validated in Boston for the return trip. The return must be begun on the date on which the ticket is validated, and the passengers must arrive at their original starting point by midnight of June 14.

The Central Passenger Association covers railroads operating in the states of Indiana and Ohio; the lower peninsula of Michigan; that portion of Illinois on and south of a line drawn from Chicago to Peoria, and thence to Burlington, Iowa, including St. Louis and Hannibal, Mo., and border portions of Kentucky and West Virginia extending from Evansville, Ind., to Louisville, Ky., thence to Kenova, and thence a line leading to Pittsburgh.

This association has authorized the sale of round trip tickets to Boston in accordance with the terms which have been authorized by the Trunk Line Association.

The Western Passenger Association has authorized the sale of these special round trip tickets to Boston from points within its territory as indicated below:

These tickets will be on sale from June 1 to 5 inclusive, with final return limit of June 13 from points served by the Western Passenger Association in Illinois, Iowa, Minnesota, Missouri, Northern Michigan and Wisconsin.

From Kansas, Nebraska, North Dakota and South Dakota, the selling dates will be from May 31 to June 4, inclusive, with final return limit of June 14.

From Colorado, Idaho, Montana, Utah and Wyoming, the selling dates will be from May 29 to June 2, inclusive, with final return limit of June 16.

The validating dates for return on all these tickets will be from June 3 to June 11, inclusive.

The Southwestern Passenger Association has authorized special fares and arrangements from points within its territory as indicated: From Illinois and Missouri, the authorized selling dates are June 1 to 5, final return limit, June 13; from points in Arkansas, Kansas, Louisiana, Nebraska, Oklahoma and Texas (except El Paso) selling dates are from May 31 to June 4, and the final return limit, June 14; from El Paso and points in Colorado, the selling dates are from May 29 to June 2, and the final return limit, June 17. The rates are approximately identical with those announced for

the other passenger associations. The exact rates may be secured from local passenger agents.

The Southeastern Passenger Association has announced special excursion fares from certain designated stations in Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia and West Virginia, and also from Cincinnati, Ohio; Helena, Ark.; Cairo, Ill.; Evansville, Ind., and Washington, D. C. Members in this territory should at once secure identification certificates and consult their local passenger agent for detailed information.

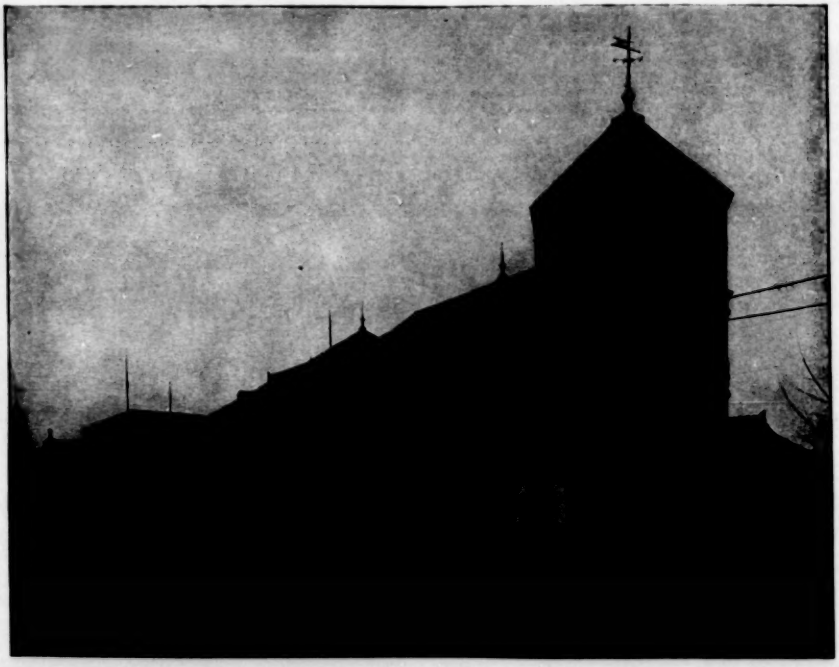
From points on the Pacific Coast, either all year tourist fares or summer tourist fares will be available. It will be unnecessary to present an identification certificate for the purchase of either of these tickets.

Tickets sold on this tariff will not be honored on the trains designated below:

Boston & Albany R. R.	Nos. 25 and 26
New York, New Haven & Hartford R. R.	Nos. 15, 16, 23 and 24
New York Central R. R.	Nos. 25 and 26
Pennsylvania R. R.	Nos. 28, 29, 127, 130, 187, 188, 198 and 199

Members who desire to take advantage of these special railroad fares must secure "identification certificates," which are to be deposited with the ticket agent who sells the round trip ticket. These identification certificates will be forwarded promptly to those members who make requests for them from the Secretary of the American Medical Association, 535 North Dearborn Street, Chicago. A self-addressed, stamped envelop should be enclosed with the request. Members who plan to take advantage of these fares should write at once for identification certificates. A failure to do this may make it impossible to forward the identification certificate in time so that the member may use it in purchasing his transportation to Boston.

Members who plan to go to Boston are urged to consult the local ticket agent in their home town for full information regarding rates, time limits, extensions and stopover privileges. The tariff schedules on file at every ticket office will allow the local ticket agent to quote rates from that point. In addition to this, with the assistance of the agent, the physician can determine whether or not it is possible to arrange for side trips either going or coming. Moreover, it may be necessary for the local agent to secure a special form for the round trip ticket from a central distributing point.



MECHANICS' BUILDING

Scientific Exhibit, Registration, Commercial Exhibit, Information Bureau and Postoffice in this building; Meeting place of the Sections on Stomatology; Nervous and Mental Diseases; Dermatology and Syphilology; Urology; Orthopedic Surgery and Miscellaneous Topics

Through the courtesy of representatives of the New York Central Railroad Company, the following table has been prepared announcing approximate railroad rates from various points:

From	Price	Selling Dates	Return Limit	One Way Pullman Fare — Lower	One Way Pullman Fare — Upper	Drawing Room
Chicago, Ill.	$ 63.36	May 29-June 5	June 14	$10.94	$ 8.75	$38.88
Denver, Colo.	119.84	May 29-June 2	June 17	22.68	18.14	79.38
Los Angeles, or San Francisco, Calif.	213.67	Daily (All year tourist fares, Certificate not required)	9 mos.	36.05	28.84	126.36
Portland, Ore. or Seattle, Wash.	168.43	June 1-Sept. 30 (Summer tourist fares, Certificates not required)	Oct. 31	35.24	28.10	115.50
St. Paul, Minn.	82.56	June 1-5	June 14	13.77	11.02	48.60
St. Louis, Mo.	74.44	May 29-June 2	June 17	12.96	10.37	45.36
St. Louis, Mo. via Chicago	80.21					

Special Train Accommodations

Physicians from Kansas City and those who pass through that city may take advantage of a special Pullman train from that point through to Boston which is being arranged by the Jackson County, Missouri, Medical Society. Those who desire to use this train should communicate with the secretary of the Jackson County Medical Society, General Hospital, Kansas City, Mo., in order to complete arragements which will assure Pullman accommodations on that train.

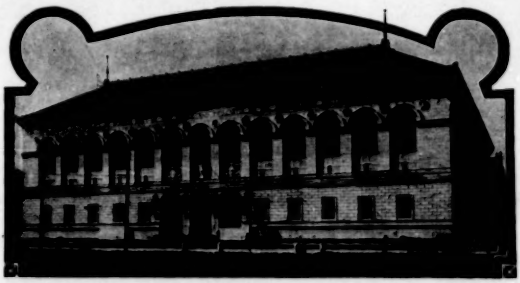
The Chicago Medical Society, through the Harlan-Spears Tours, 20 West Jackson Boulevard, Chicago, has arranged for personally conducted tours from Chicago to Boston and return in accordance with a number of different itineraries. Those who join these tours, going and returning by the same route, may take advantage of the special railroad rate provided they secure the necessary Identification Certificate from the Secretary of the American Medical Association. The rates charged for these tours cover all necessary expenses except meals while in Boston. A deposit of $15 a person is required, this amount to apply against the final payment, or to be refunded in case the reservation is canceled. Requests for information and applications for reservations should be made directly to the Harlan-Spears Tours.

The passenger agents of the lines going out from Chicago will book Pullman reservations and will arrange so that these assignments will be grouped in accordance with the number of reservations made so as to provide special cars or special sections of trains for the use of physicians going to Boston.

REGISTRATION

The Bureau of Registration will be located in the Massachusetts Charitable Mechanics Association Building, Huntington Avenue, between Garrison and West Newton streets. A committee of local physicians will assist those desiring to register. A branch postoffice will be opened and a bureau of information established in connection with the Registration Bureau. Here may be secured copies of the *Daily Bulletin*, which announces the names of visitors and other important convention items.

Fellows, Affiliate, Associate and Honorary Fellows, and Invited Guests only may register and take part in the work of any of the sections of the Scientific Assembly. Members of the organization, i. e., members in good standing in the constituent associations, are eligible to Fellowship in the Scientific Assembly. The Fellows of the Scientific Assembly are those members who have, on the prescribed form, applied for Fellowship, subscribed to THE JOURNAL, and paid their annual Fellowship dues for the current year. These annual Fellowship dues provide for a subscription to THE JOURNAL for one year.



BOSTON PUBLIC LIBRARY

In a word, members of component county medical societies are *ipso facto* members of their several constituent state associations and are eligible for Fellowship in the Scientific Assembly. Members should qualify as Fellows before they start for Boston, and receive a pocket card certifying to their Fellowship. This pocket card will enable its holder to register at the Boston Session readily and without undue delay. Those who do not have pocket cards should secure them by writing to the American Medical Association, 535 North Dearborn Street, Chicago.

ARRANGEMENTS FOR SECURING POCKET CARD

Arrangements will be made so that it will be possible for members of the organization to qualify as Fellows of the Scientific Assembly after they reach Boston; but it will require more time to register, and the delay will not only be a hardship to the physician who postpones qualifying as a Fellow, but also will be an inconvenience to others waiting their turn to register. Those who apply for Fellowship at Boston should provide themselves, before leaving their homes, with certificates signed by the secretary of their state association, certifying to their being members in good standing in the state and county branches of the organization: a membership card for 1921 issued by the constituent state association will be accepted.

Register Early

Physicians of Boston and Massachusetts, as well as other Fellows who are in Boston on Monday and Tuesday, should register as early as possible. It will be an accommodation to visiting physicians to find the names and addresses of the members of the Boston profession listed in the *Daily Bulletin* for Tuesday, June 7.

Suggestions Which Will Facilitate Registration

Every one who registers will fill out completely the spaces on both parts of the double registration cards, which will be found on the tables in front of the Registration Bureau. These entries should be written very plainly, or printed, as the cards are given to the printer to use as "copy" for the *Daily Bulletin*.

1. Fellows who have their pocket cards with them can be registered with little or no delay. They should present the filled out registration card, together with their pocket card, at one of the windows marked "Registration by Pocket Card." There the clerk will compare the two cards, stamp the pocket card and return it, and supply the Fellow with a copy of the official program and other printed matter of interest to those attending the annual session.

2. Those Fellows who have forgotten their pocket cards should present the filled in registration card at the window marked "Paid—No Card." The work of registration at this window will be conducted as rapidly as possible; but the necessity of finding the Fellow's name on the Fellowship roster may occupy a considerable time and will occasion inconvenience to those who neglect to bring their pocket cards with them.

3. The Fellow whose 1921 dues are unpaid should present his filled in registration card with the amount of his Fellowship dues ($6) at one of the windows marked "Cash." Here, too, there will be some delay; but the work of registering will be conducted as promptly as possible.

4. As previously stated, it will assist in registering if those who desire to qualify as Fellows will file their applications and qualify as Fellows by writing directly to the American Medical Association, 535 North Dearborn Street, Chicago, so that their Fellowship may be entered not later than May 28. Any applications received later than May 28 will be given prompt attention, but the Fellowship pocket card may not reach the applicant in time so that he can use it in registering at the Boston Session.

BOSTON HOTELS

Hotel reservations should be secured early. By arrangements made between the Local Hotel Committee and the hotels, requests for reservations are referred to the Hotel Committee. Physicians will, therefore, save time by writing for reservations to the Committee on Hotels rather than directly to the hotel in which accommodation is wanted. The accompanying table shows the daily rates and accommodations available at a number of Boston hotels. It will be a great comfort on arriving at Boston to go at once to a hotel which is expecting you rather than to make a round of hotels, finding a number of them completely filled, and finally being compelled to take the first lodgings which can be found in hurried personal search. Write to the LOCAL COMMITTEE ON HOTELS, DR. JOHN T. BOTTOMLEY, Chairman, The Boston Medical Library, 8 The Fenway, Boston 17, Mass., requesting the hotel reservations you desire. In writing to the Committee, be sure to indicate your first, second and third choices of hotels and to authorize the making of the reservation which will most nearly meet the needs of your party. It is important that the Hotel Committee be advised of the number of rooms you desire to have reserved and whether with or without bath; also that you state the total daily charge which you are willing to pay, European plan. It will be expected that if you are unable to occupy the reservation and if you fail to notify the Committee at least ten hours before the time for which the reservation is made, you will pay one day's charges in the event that the hotel shall hold the Committee for that amount. If for any reason after having secured a reservation, conditions make it impossible to attend the annual session, the Hotel Committee should be advised promptly.

Hotel	Street Address	Without Bath		With Bath		Suite	
		Single	Double	Single	Double	For Two	More than Two
ADAMS HOUSE *Orthopedic Surgery*	553 Washington St.	.....	3.50–4.50	.....	6.00– 7.00	.....	.....
AMERICAN HOUSE	56 Hanover St.	.....	4.00	.....	6.00	10.00	15.00
ARLINGTON	18 Chandler St.	.....	.....	2.50–3.00	4.00– 5.00	7.00	7.00– 8.00
AVERY	24 Avery St.	.....	.....	.....	.....	6.00	.....
BELLEVUE *Pathology and Physiology* *Prev. Med. & Public Health*	21 Beacon St.	.....	4.00–6.00	.....	8.00–10.00	.....	12.00–18.00
BREWSTER	19 Boylston St.	2.50–3.00	.....	3.00–4.00	5.00– 7.00	10.00	10.00
BRUNSWICK *Lar., Otol. & Rhin.*	Boylston and Clarendon	3.00	5.00	4.00	6.00– 7.00	8.00	12.00–15.00
BUCKMINSTER *Obst., Gyn. & Ab. Surg.*	641 Beacon St.	2.50	5.00	3.00	6.00	8.00	8.00–10.00
COMMONWEALTH	Bowdoin St.	.....	.....	.....	5.00	.....	10.00
COPLEY-PLAZA	Copley Square	.....	.....	6.00	11.00	20.00	30.00
COPLEY SQUARE *Pharmacology & Therapeutics* *Dermatology & Syphilology*	49 Huntington Ave.	.....	.....	4.00	6.00	.....	.....
ESSEX *Gastro-Ent. & Proctology*	693 Atlantic Ave.	3.00	.....	5.00	7.00– 8.00	.....	.....
FRITZ-CARLETON	1138 Boylston St.	3.00	4.50	.....	8.00–10.00	.....	12.00–15.00
GARRISON HALL	8 Garrison St.	.....	.....	3.00	5.00	.....	8.00–10.00
LANGHAM	1699 Washington St.	2.00	3.00	3.00	4.00	5.00	7.00– 8.00
LENOX *Surg., Gen. & Abdominal*	Exeter and Boylston	3.50	5.00	5.00	8.00	10.00	.....
OXFORD	40 Huntington Ave.	2.00–2.50	4.00	4.00	5.00	8.00	10.00–15.00
PARKER HOUSE *Diseases of Children* *Stomatology*	School and Tremont	4.00–4.50	5.00	5.50–7.00	5.50– 7.00	12.00	12.00–17.00
PEMBERTON	Hull, Mass. (A Boston suburb)	.....	4.00–5.00	.....	10.00	14.00	14.00
PLAZA	419 Columbus Ave.	.....	3.00	.....	5.00	10.00	.....
PRISCILLA, THE (Women only)	307 Huntington Ave.	.....	.....	3.00	4.50– 6.00	.....	.....
PURITAN	390 Commonwealth	2.50	.....	5.00	6.00	10.00	15.00
PUTNAM	284 Huntington Ave.	2.00–3.00	3.00–4.00	.....	.....	.....	.....
QUINCY	47 Brattle St.	2.00–2.50	3.50–4.00	3.50	6.00– 7.00	7.00	10.00–12.00
RANELEGH	11 Mountfort	.....	.....	.....	5.00	6.00–9.00	9.00
STEWART CLUB (Women only)	102 Fenway	3.50	6.00	.....	.....	.....	.....
SOMERSET *Practice of Medicine*	Commonwealth and Charlesgate	.....	5.00	.....	10.00	16.00	.....
UNITED STATES	90 Beach St.	2.50	4.00	.....	.....	.....	.....
VENDOME (American Plan) *Ophthalmology*	Commonwealth and Dartmouth	.....	.....	8.00	14.00–16.00	20.00	.....
VICTORIA	271 Dartmouth St.	3.00	5.00	4.00	6.00	8.00	12.00
WESTMINSTER *Urology*	Copley Square	2.50	3.50	4.00	7.00	.....	.....
YOUNGS *Nervous & Mental*	Court and City Hall Ave.	.....	4.50–5.00	.....	7.00– 8.00	.....	10.00

CLINICS AT BOSTON

The Local Committee on Arrangements reports that the medical profession of Boston has arranged a series of clinics to be conducted by members of the Boston profession on Monday and Tuesday, June 6 and 7. These clinics will be open to Fellows of the Scientific Assembly, and will be conducted at the following hospitals:

CLINIC PROGRAM

BOSTON CITY HOSPITAL.—From 10 a. m. to 6 p. m., Monday, and from 9 a. m. to 1 p. m., Tuesday.

BOSTON DISPENSARY.—From 2 to 7:30 p. m., Monday, and from 9 a. m. to 4:30 p. m., Tuesday.

BOSTON FLOATING HOSPITAL.—From 2 to 4 p. m., Monday.

BOSTON PUBLIC SCHOOLS.—Open air classes may be visited at 9 and at 10:45 a. m., Monday and Tuesday.

BOSTON PSYCHOPATHIC HOSPITAL.—From 9 a. m. to 12 m., Tuesday.

PETER BENT BRIGHAM HOSPITAL.—Beginning at 10 a. m., Monday, and from 9 a. m. to 2 p. m., Tuesday.

CARNEY HOSPITAL.—Beginning at 10 a. m., Monday, and beginning at 9 a. m., Tuesday.

CHILDREN'S HOSPITAL.—From 10 a. m. to 5:30 p. m., Monday, and from 9 a. m. to 6 p. m., Tuesday; also at this hospital, the Harvard Infantile Paralysis Commission will conduct a clinic, Tuesday, beginning at 10 a. m.

FORSYTH DENTAL INFIRMARY FOR CHILDREN.—From 9 a. m. to 2 p. m., Monday and Tuesday.

HOUSE OF THE GOOD SAMARITAN.—Beginning at 10 a. m., Monday.

INFANT'S HOSPITAL.—From 10 a. m. to 6 p. m., Monday, and from 9 a. m. to 6 p. m., Tuesday.

INDUSTRIAL CLINIC.—From 8 a. m. to 6 p. m., Monday and Tuesday.

PARKER HILL HOSPITAL AND WEST ROXBURY HOSPITAL (RECONSTRUCTION CLINIC).—Beginning at 2 p. m., Tuesday.

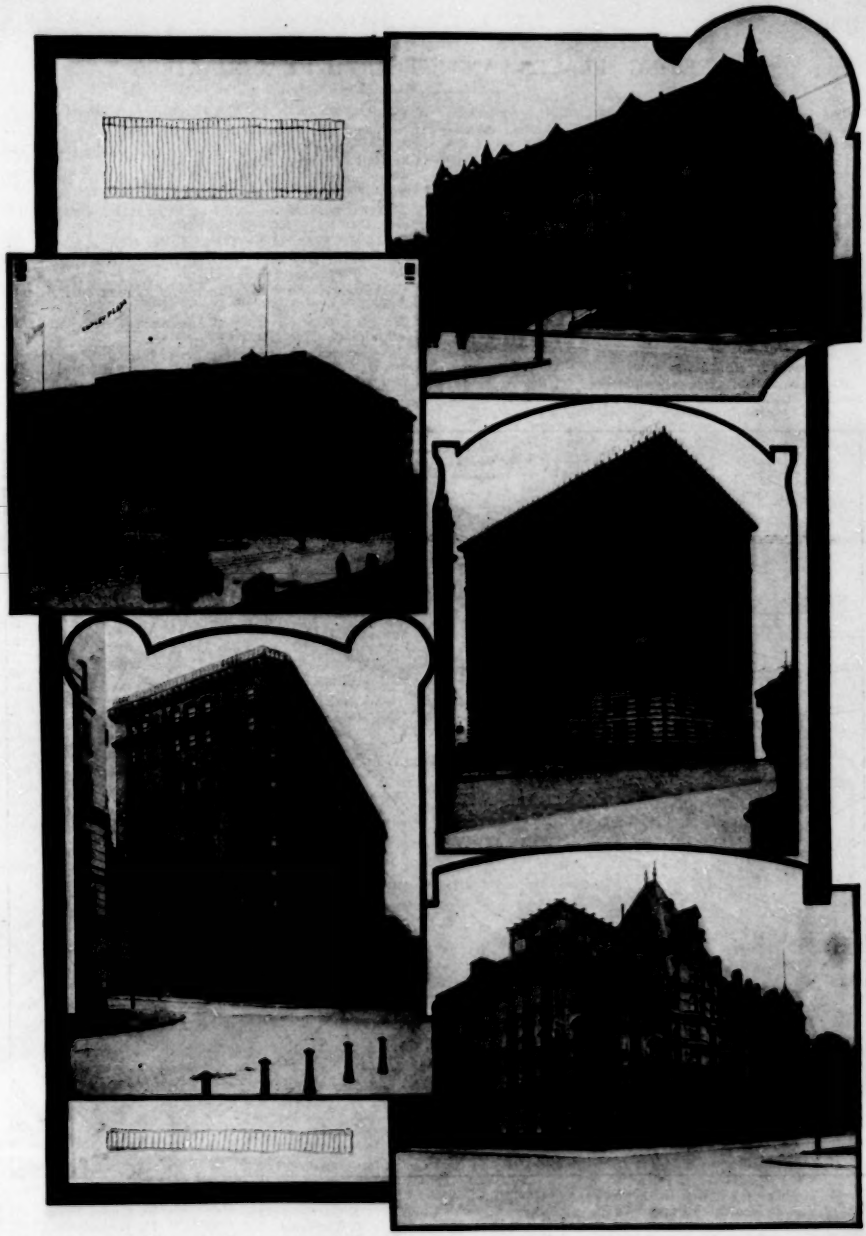
MASSACHUSETTS GENERAL HOSPITAL.—From 10 a. m. to 1 p. m., Monday, and from 9 a. m. to 10 p. m., Tuesday.

ST. ELIZABETH'S HOSPITAL.—Beginning at 10 a. m., Monday and Tuesday.

THROAT CLINIC.—From 2 to 4 p. m., Monday and Tuesday.

NEW ENGLAND HOSPITAL FOR WOMEN AND CHILDREN.—From 9 a. m. to 12 m., Monday, and from 9 a. m. to 6 p. m., Tuesday.

In addition, the Angel Memorial Hospital for Animals will be open for inspection by visiting physicians throughout all the days of the annual session.



SOME BOSTON HOTELS

Left—above: COPLEY-PLAZA; below: TOURAINE. (Courtesy of Thos. E. Marr.) Right—above: BRUNSWICK; middle: LENOX; below: VENDOME.

MEETING PLACES AND SECTION HEADQUARTERS

The following have been designated as section hotel headquarters, and as meeting places* for the Boston session—June 6 to 10:

HOUSE OF DELEGATES: *Boston Medical Library Building* (B).

PRACTICE OF MEDICINE: Somerset (2). *Convention Hall* (D).

SURGERY, GENERAL AND ABDOMINAL: Lenox (4). *Jordan Hall* (E).

OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY: Buckminster (1). *Jordan Hall* (E).

OPHTHALMOLOGY: Vendome (6). *Huntington Hall* (C).

LARYNGOLOGY, OTOLOGY AND RHINOLOGY: Brunswick (12). *Huntington Hall* (C).

DISEASES OF CHILDREN: Parker House (School and Tremont Streets). *Convention Hall* (D).

PHARMACOLOGY AND THERAPEUTICS: Copley Square Hotel (7) *Harvard Medical School* (F).

PATHOLOGY AND PHYSIOLOGY: Bellevue (21 Beacon Street). *Harvard Medical School* (F).

STOMATOLOGY: Parker House (School and Tremont Streets). *Reception Hall, Mechanics Building* (A).

NERVOUS AND MENTAL DISEASES: Youngs Hotel (Court and City Hall Avenue). *Paul Revere Hall* (A).

DERMATOLOGY AND SYPHILOGY: Copley Square Hotel (7). *Talbot Hall* (A).

PREVENTIVE MEDICINE AND PUBLIC HEALTH: Bellevue (21 Beacon Street). *Harvard Medical School* (F).

UROLOGY: Westminster (11). *Talbot Hall* (A).

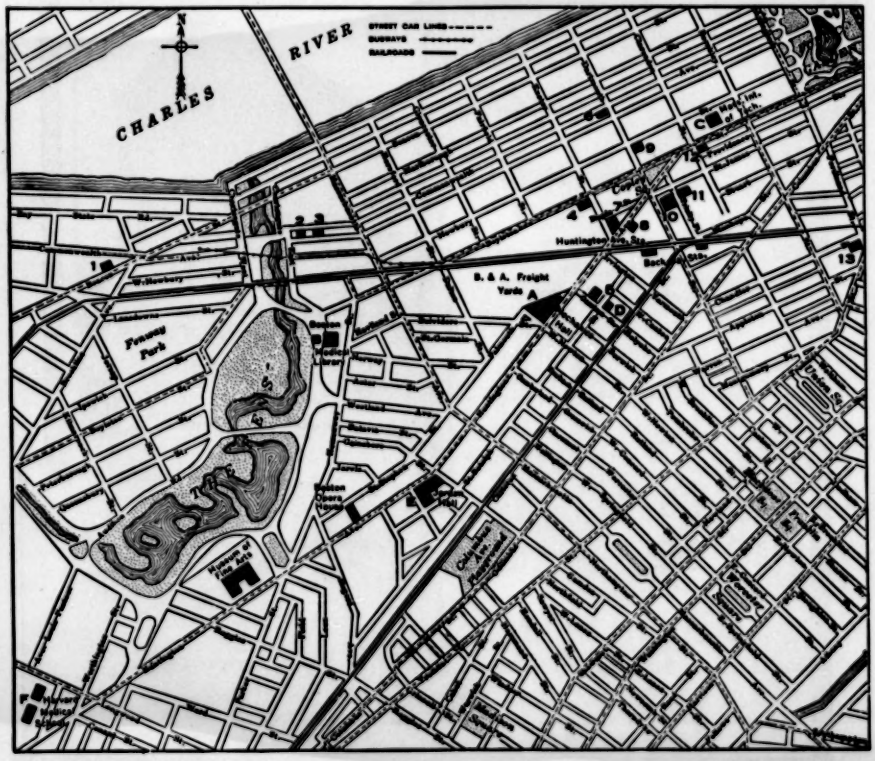
ORTHOPEDIC SURGERY: Adams House (553 Washington Street). *Paul Revere Hall* (A).

GASTRO-ENTEROLOGY AND PROCTOLOGY: Essex (693 Atlantic Avenue). *Harvard Medical School* (F).

MISCELLANEOUS (Meeting on Anesthesia): *Reception Hall, Mechanics Building* (A).

GENERAL HEADQUARTERS: SCIENTIFIC EXHIBIT, REGISTRATION BUREAU, COMMERCIAL EXHIBIT, INFORMATION BUREAU AND BRANCH POSTOFFICE: *Mechanics Building* (A).

* Meeting places in italics.



A. Mechanics Building.
B. Boston Medical Library.
C. Huntington Hall.
D. Convention Hall.
E. Jordan Hall.
F. Harvard Medical School.

HOTELS

1. Buckminster.
2. Somerset.
3. Puritan.
4. Lenox.
5. Garrison Hall.
6. Vendome.
7. Copley Square Hotel.
8. Oxford.
9. Victoria.
10. Copley-Plaza.
11. Westminster.
12. Brunswick.
13. Arlington.

ENTERTAINMENT

(NOTE.—The official badge will be required for admission to entertainments and other places to which entrance is granted to those in attendance on the annual session.)

The Scientific Assembly will open with a general meeting convening at 8:30 p. m., Tuesday, June 7. The Local Committee on Arrangements announces the following entertainments:

Wednesday, June 8

From 2 to 6 p. m., the ladies are invited to a tea on the grounds of the Harvard Medical School. The time between 6 and 8:30 p. m. is set apart for alumni, medical fraternities, war service groups and other organization reunions, smokers and banquets. Assistance will be given to any organization wishing to arrange for such a gathering if requests are addressed to Dr. Beth Vincent, Chairman, Committee on Banquets, 295 Beacon Street, Boston, Mass. From 8:30 to 11 p. m., the trustees of the Museum of Fine Arts, Huntington Avenue, invite the Fellows and their guests to a reception to be given at the museum. This opportunity to visit the museum should be taken advantage of by as many as possible of visiting Fellows and their guests. The museum contains an unrivaled collection of classic and modern art, including Chinese and Japanese.

HARVARD LAW SCHOOL

CLASS OF 1877 GATE, HARVARD

Thursday, June 9

In the afternoon, the ladies are invited to visit the estates of Honorable Larz Anderson, Mr. E. D. Brandegee and Prof. Charles Sargent in Brookline and the Arnold Arboretum in Jamaica Plains. Automobiles will be furnished to take the visiting ladies through these wonderful estates. The last named is one of the most interesting botanical gardens in the country and is especially noted for its collection of trees.

On Thursday evening, there will be a reception and ball given in honor of the President. This will be held in the large hall in the Mechanics Building.

Additional Entertainments

In addition to the foregoing entertainments, excursions have been arranged which will take place on Wednesday, Thursday and Friday. Among other places of interest, visits will be made to Harvard College where competent guides will be assigned to show visitors through the buildings and grounds; one exhibit of unique interest is the wonderful collection of glass flowers in the Natural History Museum. Sight-seeing trips to historical points in Boston may also be made.

On Thursday, guests may make arrangements for a trip to Bunker Hill and the battle fields of Lexington and Concord on sight-seeing automobiles. A moderate fare will be charged for these trips.

On Friday, at a moderate fare, there will be excursions to the North Shore in automobiles.

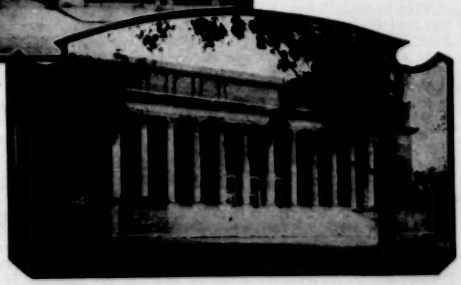
Plymouth Excursion

On registering in Boston, secure tickets for the special all day excursion to Plymouth, Mass., on Saturday, June 11. Owing to limited steamer capacity only those who secure tickets early can be certain of being taken care of for this event. Plymouth this year is celebrating the three hundredth anniversary of the landing of the Pilgrims. An interesting visit is assured to all who care to see the place so justly called "The Cradle of America." Fellows and guests are urged to make this trip on June 11 since the Tercentennial Committee has made special arrangements to receive and entertain them on this day.

The boat will leave Boston Saturday morning and return late the same afternoon. The Harvard University Band will provide entertainment throughout the trip down Massachusetts Bay and back. Luncheon will be served in Plymouth. Exchange the coupon for ticket to Plymouth on registering in Boston. A charge of $5 will be made for the round trip, including luncheon.

American Medical Golf Tournament

The Seventh Tournament of the American Medical Golf Association will be held at the Commonwealth Country Club, Monday, June 6, under the auspices of the Local Committee: Franklin Newell, chairman; Walter Lancaster; Harold Tobey, secretary, 416 Marlboro Street, Boston.



WIDNER LIBRARY, HARVARD

The events will take place both morning and afternoon.

Any Fellow of the American Medical Association in good standing, who has a degree of M.D., becomes a member of the Golf Association, on acceptance of the by-laws and payment of the enrolment fee of $2, which confers life membership. A tournament fee of $1 is charged on entrance in the tournament. All play will be in four ball matches. Players enter in the scientific sections in which they register, and the wining team carries the "section trophies" for the year.

Entries close, May 25, for all of these events. Later entrants will play in sweepstakes.

The regular committee is in charge of the handicapping.

The general secretary, Will Walter, 1414 Chicago Avenue, Evanston, Ill., receives applications and entries.

NON-AFFILIATED ORGANIZATIONS

The following organizations have announced that they will hold meetings in or near Boston during the days immediately preceding or following those on which the Scientific Assembly of the American Medical Association will meet: Medical Veterans of the World War; American Association for Thoracic Surgery; American Association of Anesthetists; American Climatological and Clinical Association; American Dermatological Association; American Gastro-Enterological Association; American Gynecological Society; American Medico-Psychological Association; American Ophthalmological Society; American Orthopedic Association; American Pediatric Society; American Proctologic Society; American Radium Society; Association for the Study of Internal Secretions; Conference of State and Provincial Health Authorities, and the Radiological Society of North America.

The Association of Military Surgeons of the United States will meet June 2-4, in the Swiss Room, Copley-Plaza Hotel. The medical profession is invited to attend.

The Medical Women's National Association will meet, June 11, at the New England Women's Club, 585 Boylston Street.

FOREIGN GUESTS

Among others, Dr. W. Blair Bell, Liverpool; Dr. H. E. G. Boyle, London; Dr. Jacques Calve, Plage, France; Sir George Lenthal Cheattle, London; Dr. Walter W. Chipman, Montreal; Dr. Pierre Janet, Paris; Sir Robert Jones, Liverpool; Prof. V. Putti, Bologna, Italy; Dr. Richard G. Rows and Lieut.-Col. Henry Smith, London; Prof. Soubbotitch, Belgrade, Serbia, and Drs. M. Turin and A. Widmer, Territet, Switzerland, are expected to be in attendance at the Boston Session. It is anticipated that there will also be a number of physicians from Mexico and South America. Accredited physicians from foreign countries will be registered as "Invited Guests," and may participate in the annual session.

TO BOSTON BY AUTOMOBILE

The splendid roads in Massachusetts and its neighboring states will undoubtedly tempt a considerable number of physicians to motor to Boston for the annual session. Presumably they will enter the New England states either through New York or Albany. While physicians who are accustomed to make automobile tours will undoubtedly provide themselves with route maps through the cooperation of the different automobile organizations in which they hold membership, it may be of interest briefly to outline two or three of the main routes between these two cities and Boston.

From New York, one of the favorite routes goes through Mamaroneck, Stamford, Norwalk, Bridgeport to New Haven. From New Haven one of two routes may be followed, either continuing along Long Island Sound through Saybrook, New London, Westerly, Narragansett Pier, Providence and into Boston, or from New Haven through Durham, Middletown, Hartford, Springfield, Worcester and into Boston.

From Albany, the favored routes go first to Pittsfield. From that point there is a choice of roads either from Pittsfield through Lenox, Huntington, Westfield and into Springfield, from there following the route previously outlined to Boston; or at Pittsfield the motorist may go to the north through the Berkshire Hills to North Adams, and from there east through Greenfield, Orange, Gardner, Fitchburg, Littleton, Common, Concord and into Boston.

CONFERENCE ON HEALTH EDUCATION

A conference on "Health Problems in Education" under the direction of the Committee of the Council on Health and Public Instruction on this subject will be held at Paul Revere Hall, Mechanics Hall on Tuesday afternoon, June 7, at 2 o'clock. A program of addresses by representative physicians and educators is now being prepared. All physicians interested in this subject and especially the members of the state committees on "Health Problems in Education" are urged to be present

MEDICAL VETERAN REUNIONS

Medical Veterans of the World War will hold its annual meeting on the afternoon of Tuesday, June 7, at 4 p. m., in Talbot Hall of the Massachusetts Charitable Mechanics Association Building. Col. Victor C. Vaughan is the president and Col. F. F. Russell the secretary of this association. All medical officers, contract surgeons of the United States Army and acting assistant surgeons in the United States Public Health Service and other physicians who served in the Medical Corps of the United States Army, of the United States Navy, and the United States Public Health Service, as well as medical members of local boards, members of medical advisory and district boards appointed by the President of the United States and the Provost Marshal General of the United States Army, and the governors of the states are eligible to membership. The object of the association "is to perpetuate fellowship, to prepare history, secure cooperation for the mutual benefit of the medical men who served in the World War, 1914-1918, and for the mutual improvement and social intercourse of its members."

There will be a Fort Riley reunion during the Boston Session. Medical officers who were at the Medical Officers' Training Camp at Fort Riley, Kansas, are invited to attend. Major Arial W. George, 43 Bay State Road, Boston, is in charge of the arrangements. A dinner will be held on Wednesday evening, June 8, probably at the Harvard Club.

Officers who served with Base Hospital 89 in France are cordially invited to attend a luncheon during the Boston Session. Dr. Walter S. Lucas, secretary of the association, will be at Hotel Brewster.

There will be a reunion and dinner of the medical officers of the Twenty-Sixth Division, Friday evening, June 10, at 7 o'clock at the Y. D. Club in Boston. Those who served with this division are strongly urged to stay over and make this reunion a success.

Physicians who served at Camp Wheeler Base Hospital will meet in reunion. Arrangements are being made under the direction of Dr. Beth Vincent, Boston, to whom requests for information should be addressed.

Medical officers who have served at Base Hospital, Camp Devens, will hold a reunion in the Student's Room, Building A, Harvard Medical School, Wednesday, June 8, at 7 p. m.

ALUMNI AND FRATERNITY REUNIONS

The Local Committee on Arrangements is arranging that members of medical fraternities and other organizations may register their attendance at the Boston Session. Announcements of reunions may be inserted in the *Daily Bulletin* on request.

The Alumni Association of the Jefferson Medical College will hold a smoker at the Boston Session; communicate with Dr. Wallace D. MacCallum, 214 Huntington Avenue, secretary.

The Harvard Medical School 1911 Class is to hold a dinner at Hotel Westminster, Boston, at 7 p. m., Wednesday, June 8. Signify intention to attend to J. H. Means, secretary, 15 Chestnut Street, Boston.

The Phi Alpha Sigma Fraternity will hold a smoker during the Boston Session; communicate with Dr. E. J. G. Beardsley at Hotel Brewster, Boston.

The Phi Beta Pi Medical Fraternity will hold a smoker at its chapter house, 1071 Beacon Street, Monday evening, June 6, as well as a banquet on Wednesday evening, June 8.

POSTOFFICE

An Association Postoffice will be maintained in connection with the Registration Bureau in the Massachusetts Charitable Mechanics Association Building, Huntington Avenue, between Garrison and West Newton streets. Guests are requested to order mail addressed to them "Care American Medical Association, Massachusetts Charitable Mechanics Association Building, Boston, Mass.," or to their hotels, as preferred.

THE SCIENTIFIC EXHIBIT

The Scientific Exhibit will be located on the second floor of Mechanic's Building. The exhibitors who have so far made application for space are:

AMERICAN POSTURE LEAGUE, New York: Exhibit on posture and its relation to health; wall charts, etc.

THE AMERICAN SOCIAL HYGIENE ASSOCIATION, INC., New York: Exhibit showing panels on social hygiene and preventive medicine.

BATTLE CREEK SANITARIUM, Battle Creek, Mich.: Exhibit of charts and specimens on the duodenum and biliary tract and experimental observation on blood pressure variations.

AMERICAN RED CROSS (First Aid Service Dept.), Washington, D. C.: Exhibit of posters, first aid supplies.

UNITED STATES ARMY, MEDICAL DEPARTMENT, Washington, D. C.: Specimens of gunshot injuries of the World War, etc.; pictures and charts.

COMMUNITY HEALTH AND TUBERCULOSIS DEMONSTRATION, Framingham, Mass.: Demonstration on health; tuberculosis.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION, New Haven, Conn.: Drs. Lafayette Mendel and Thomas B. Osborne will show a group of stuffed and mounted rats, illustrating the effect of different qualities of protein on growth; charts illustrating work on nutrition and growth. Dr. E. M. Bailey will show diabetic foods with analysis thereof and literature of the Station on the subject.

THE PRUDENTIAL INSURANCE COMPANY, Newark, N. J.: Exhibit showing graphic charts on diseases and public health.

SHURLEY CLINIC, Detroit, Mich.: Exhibit showing some diagnostic roentgen-ray plates, illustrating diseases of the accessory sinuses and chest.

MEDICAL COLLEGE OF THE STATE OF SOUTH CAROLINA, Charleston, S. C.: Exhibit on ulcerative granulomata; gross and microscopic exhibit, photographs of clinical and experimental lesions, microscopic, histological and biological demonstration, directed by Dr. Kenneth M. Lynch.

THE MAYO FOUNDATION, Rochester, Minn.: Exhibit of charts and photographs for demonstration purposes.

UNITED STATES PUBLIC HEALTH SERVICE, Washington, D. C.: Exhibit under the direction of Dr. C. C. Pierce, assistant surgeon-general, showing educational placards and posters from the Division of Venereal Diseases.

AMERICAN SOCIETY FOR THE CONTROL OF CANCER, New York: Exhibit showing the work of the organization.

THE ROCKEFELLER INSTITUTE, New York: Exhibit on experimental syphilis, drawings, photographs and museum specimens, presented by Drs. Brown and Pearce.

NEW YORK POST-GRADUATE MEDICAL SCHOOL, New York: Educational exhibit.

DR. V. H. KAZANJAIN, Harvard Dental School, Boston: Exhibit on facial restoration, by members of Harvard Dental School, showing a large collection of war specimens of injuries to face and jaws, plaster masks, casts, photographs, etc.

DR. LUCIEN HOWE, Buffalo, N. Y.: Exhibit showing (A) hereditary cataract artificially produced and (B) syphilitic eye lesions.

DR. JOHN E. LANE, New Haven, Conn.: Exhibit on photographs of dermatologic cases.

DR. L. R. SANTE, City Hospital, St. Louis, Mo.: Exhibit of the roentgen-ray department on pneumoperitoneum and unusual cases.

DR. J. PARSONS SCHAEFFER, Jefferson Medical College, Philadelphia: Exhibit of anatomical specimens, preparations of the para-nasal accessory sinuses and related parts.

DR. ANGEL SORESI, New York: Exhibit of specimens and illustrations.

DR. S. CALVIN SMITH, Philadelphia: Exhibit of wall charts of electrocardiograms, illustrating a paper on observations of the heart in diphtheria.

DR. PHILEMON E. TRUESDALE, Fall Rivers, Mass.: Exhibit of five roentgenograms of diaphragmatic hernia.

AMERICAN LIBRARY ASSOCIATION, Boston: Exhibit of books for patients in general hospitals.

WARREN MUSEUM, Boston: Historical exhibit of books, instruments, etc.

DR. HAROLD C. ERNST, Boston: Exhibit on the development of the microscope; books on same subject.

DR. P. R. BENEDICT, Boston: Exhibit of respiration apparatus.

DR. J. RAWSON PENNINGTON, Chicago: Exhibit of charts and photographs on rectal anatomy and surgery.

DR. FRED J. TAUSSIG, St. Louis, Mo.: Exhibit of roentgen-ray plates on obstetrics and gynecology; an exhibition of pathological specimens, new instruments or apparatus and teaching models.

DR. TOM A. WILLIAMS, Washington, D. C.: Exhibit on new schema of the brachial plexes and spinal nerve roots.

AMERICAN MEDICAL ASSOCIATION: Exhibits illustrating the work of the Council on Pharmacy and Chemistry, the Chemical Laboratory, the Propaganda Department of THE JOURNAL, the Council on Medical Education and Hospitals, the Council on Health and Public Instruction, and the Publication Department of THE JOURNAL.

Moving Picture Theater

Opening at noon on Monday, running continuously each day thereafter from 9:00 a. m. to 5:30 p. m. until noon on Friday. The program will consist of the following:

DR. FREDERICK H. VERHOEFF, Boston: Lantern slide demonstration of pathology of the eye.

DR. F. E. SAMPSON, Creston, Iowa: Lantern slide demonstration on rural hospitals and rural centers.

DR. ANGEL SORESI, New York: Moving pictures and slides illustrating surgical methods.

DR. J. PARSONS SCHAEFFER, Jefferson Medical College, Philadelphia: Lantern slide demonstration on the anatomy of the optic nerve.

DR. E. C. ROSENOW, Rochester, Minn.: Lantern slide demonstration on the etiology of epidemic hiccough, encephalitis and poliomyelitis.

DR. PAUL B. MAGNUSON, Chicago: Demonstration of the use of ivory in internal splinting of fractures, retention of bone graft; demonstration of technique of five operations.

DR. ARVINE E. MOZINGO, Indianapolis: Film showing the surgical treatment of empyema by closed method.

DR. W. O. HENRY, Los Angeles: Lantern slides.

THE AMERICAN SOCIAL HYGIENE ASSOCIATION, New York: Moving pictures on social hygiene.

THE PRUDENTIAL INSURANCE COMPANY, Newark, N. J.: Showing lantern slides, demonstration of charts on diseases and public health.

SHURLEY CLINIC, Detroit, Mich.: Lantern slides and demonstration of some diagnostic roentgen-ray plates, illustrating diseases of the accessory sinuses and chest.

THE MAYO FOUNDATION, Rochester, Minn.: Films and lantern slide demonstrations by Drs. Wilson, Bowders, Bowing, Keyser, Mann and Magath, showing epithelioma of the genito-urinary organs; the use of radium and roentgen ray in the treatment of carcinoma of the cervix uteri; the dispersion of bullet energy in relation to wound effects; the experimental production of stones in the kidney; the effect of the total removal of the liver.

UNITED STATES PUBLIC HEALTH SERVICE, Washington, D. C.: Directed by Dr. C. C. Pierce, assistant surgeon-general; film showing the modern diagnosis and treatment of gonorrhea and syphilis.

DR. GEORGE GOLER, Health Bureau, Rochester, N. Y.: Film showing Rochester Tonsil-Adenoid Clinic.

DR. R. B. H. GRADWOHL, Chicago: Demonstration on blood chemistry.

DR. ROBERT EMMET FARR, Minneapolis: Film showing major surgical operations performed under local anesthesia.

DR. JOSEPH D. EBY, New York: Film showing complete operation relating to epidermic inlay.

DR. ISRAEL BRAM, Philadelphia: Lantern slides and demonstration of goiter and patients.

DR. FRED H. ALBEE, New York: Film showing bone operations.

PRELIMINARY PROGRAM OF THE SCIENTIFIC ASSEMBLY

PROGRAM OF THE OPENING MEETING

Tuesday, June 7—8: 30 p. m.

Music.

Call to Order by the President, WILLIAM C. BRAISTED, Washington, D. C.

Invocation. REV. GEORGE A. GORDON, D.D., Boston.

Announcements. FRED B. LUND, Chairman of the Local Committee of Arrangements.

Address of Welcome. HON. CHANNING H. COX, Governor of Massachusetts.

Address of Welcome. HON. ANDREW J. PETERS, Mayor of Boston.

Music.

Introduction and Installation of President-Elect HUBERT WORK, Pueblo, Colo.

Address. HUBERT WORK.

Music.

THE PROGRAMS OF THE SECTIONS

Outline of the Scientific Proceedings—The Preliminary Program and the Official Program

The following papers are announced to be read before the various sections. The order here is not necessarily the order which will be followed in the Official Program, nor is the list complete. The Official Program will be a pamphlet similar to those issued in previous years, and will contain the final program of each section with abstracts of the papers, as well as lists of committees, programs of the General Meeting, lists of entertainments, map of Boston and other information. To prevent misunderstandings and to protect the interest of advertisers, it is here announced that this Official Program will contain no advertisements. It is copyrighted by the American Medical Association and will not be distributed before the session. A copy will be given to each Fellow on registration.

SECTION ON PRACTICE OF MEDICINE

MEETS IN CONVENTION HALL

OFFICERS OF SECTION

Chairman—HENRY S. PLUMMER, Rochester, Minn.
Vice Chairman—G. CANBY ROBINSON, Nashville, Tenn.
Secretary—NELLIS B. FOSTER, New York.
Executive Committee—WALTER L. BIERRING, Des Moines; JAMES S. McLESTER, Birmingham, Ala.; H. S. PLUMMER, Rochester, Minn.

(Stenographer—DR. W. W. BELLAMY, BOSTON)

Wednesday, June 8—9 a. m.

1. Tropical Sprue. DAVID BOVAIRD, New York.
2. Studies in Familial Neurosyphilis. JOSEPH E. MOORE and ALBERT KEIDEL, Baltimore.
3. Fasting as a Method for Treating Epilepsy (Lantern Demonstration). H. RAWLE GEYELIN, New York.
4. Sulphur Dioxid in the Treatment of Experimental Tuberculosis. PHILIP H. PIERSON, San Francisco.
5. The Importance of the Study of Symptoms with a Discussion of Mackenzie's Law Governing Their Causation. F. M. POTTENGER, Monrovia, Calif.
6. An Automatic Method for Serial Blood Pressure Observations in Man (Lantern Demonstration). M. A. BLANKENHORN, Cleveland.

Thursday, June 9—9 a. m.

JOINT MEETING OF SECTIONS ON PRACTICE OF MEDICINE, PHARMACOLOGY AND THERAPEUTICS AND PATHOLOGY AND PHYSIOLOGY

Meeting Place—Convention Hall

SYMPOSIUM ON BASAL METABOLISM IN CLINICAL MEDICINE

7. Address. HENRY S. PLUMMER, Rochester, Minn.
8. Fundamental Ideas Regarding Basal Metabolism. GRAHAM LUSK, New York.
9. The Measurement and Standards of Basal Metabolism (Lantern Demonstration). FRANCIS G. BENEDICT, Boston.
10. The Basal Metabolic Rates in Hyperthyroidism (Lantern Demonstration). WALTER M. BOOTHBY, Rochester, Minn.
11. The Determination of the Basal Metabolism as an Aid to Diagnosis and as a Guide to Treatment in Various Diseases (Lantern Demonstration). JAMES H. MEANS, Boston.
12. The Basal Metabolism of Fever. EUGENE F. DU BOIS, New York.

Friday, June 10—9 a. m.

Election of Officers

13. Truer Standards in the Diagnosis of Heart Failure: A Hitherto Unemphasized Form of Arrhythmia. HARRY I. WIEL, San Francisco.
14. Observations on the Heart in Diphtheria (Lantern Demonstration). S. CALVIN SMITH, Philadelphia.
15. Principles Underlying Treatment of Heart Disease by Exercise (Lantern Demonstration). THEODORE B. BARRINGER, New York.
16. Intermittent Hydrarthrosis. WALTER L. BIERRING, Des Moines.
17. The Acute Element in Chronic Nephropathies. CHARLES P. EMERSON, Indianapolis.

SECTION ON SURGERY, GENERAL AND ABDOMINAL

MEETS IN JORDAN HALL

OFFICERS OF SECTION

Chairman—GEORGE P. MULLER, Philadelphia.
Vice Chairman—E. CLARENCE MOORE, Los Angeles.
Secretary—URBAN MAES, New Orleans.
Executive Committee—JOHN T. BOTTOMLEY, Boston; DEAN D. LEWIS, Chicago; GEORGE P. MULLER, Philadelphia.

(Stenographer—MRS. M. C. REPP, Philadelphia)

Wednesday, June 8—2 p. m.

1. The Treatment of Arteriovenous Aneurysm. JOHN F. CONNORS, New York.
2. Notes on Suturing Blood Vessels, with Report of a Sutured Brachial Artery. J. SHELTON HORSLEY, Richmond, Va.
   Discussion of papers 1 and 2 to be opened by RUDOLPH MATAS, New Orleans, and JOHN H. GIBBON, Philadelphia.
3. Possible Differentiation of Cases for Whole Blood Transfusion and Citrated Blood Transfusion. BERTRAM M. BERNHEIM, Baltimore.
   Discussion to be opened by GEORGE W. CRILE, Cleveland, and BETH VINCENT, Boston.
4. Tidal Irrigation of Wounds by Means of Liquid Tight Closure with Special Reference to the Treatment of Empyema of the Thorax. WALTER H. TAYLOR and NORMAN B. TAYLOR, Toronto.
5. Some of the Effects of Solutions on Wounds and Their Practical Applications. WALTER GIESS, Cincinnati.
   Discussion of papers 4 and 5 to be opened by EVARTS GRAHAM, St. Louis.
6. The Value to the Surgeon of the Basal Metabolic Rate in Toxic Goiter. J. EARL ELSE, Portland, Ore.
   Discussion to be opened by FRANK H. LAHEY, Boston, and EMIL GOETSCH, Brooklyn.
7. Observations On and Indications For the Treatment of Cranial Injuries. W. J. CASSIDY, Detroit.
   Discussion to be opened by ERNEST SACHS, St. Louis, and WILLIAM SHARP, New York.
8. Acute Postoperative Dilatation of the Stomach. EMIL NOVAK, Baltimore.
   Discussion to be opened by MALVERN B. CLOPTON, St. Louis, and ALBERT E. HALSTEAD, Chicago.

Thursday, June 9—2 p. m.

9. Chairman's Address. GEORGE P. MULLER, Philadelphia.
10. High Jejunostomy as a Prevention of Postoperative, and in the Treatment of Acute Ileus. ARTEMAS I. MACKINNON, Lincoln, Neb.
    Discussion to be opened by DONALD MACRAE, JR., Council Bluffs, Ia., and JOHN A. HARTWELL, New York.
11. Prepancreatic and Peripancreatic Disease. JOHN B. DEAVER, Philadelphia.

12. The Relation of the Liver and Pancreas to Gallbladder Infections. E. STARR JUDD, Rochester, Minn.
Discussion of papers 11 and 12 to be opened by ALBERT J. OCHSNER, Chicago, and WILLARD BARTLETT, St. Louis.
13. Mesenteric Vascular Occlusion. ROSS G. LOOP, Elmira, N. Y.
Discussion to be opened by MARTIN B. TINKER, Ithaca, N. Y.; GEORGE M. SHEAHAN, Quincy, Mass., and GEORGE G. ROSS, Philadelphia.
14. Diverticula of the Duodenum. E. WYLLYS ANDREWS, Chicago.
Discussion to be opened by E. CLARENCE MOORE, Los Angeles, and HARRY P. RITCHIE, St. Paul.
15. Carcinoma Developing on Gastric Ulcer. CHARLES H. MAYO, Rochester, Minn.
Discussion to be opened by JOHN M. T. FINNEY, Baltimore.
16. Gastrojejunal Ulcers. RICHARD LEWISOHN, New York.
Discussion to be opened by EUGENE H. POOL, New York.

Friday, June 10—2 p. m.

Election of Officers

17. Intussusception. EDWARD W. PETERSON, New York.
Discussion to be opened by CHARLES GORDON HEYD, New York, and JAMES S. STONE, Boston.
18. The Surgery of the Trigeminal Nerve. CHARLES H. FRAZIER, Philadelphia.
Discussion to be opened by CHARLES A. ELSBERG, New York, and GILBERT HORRAX, Boston.
19. The Omission of Drainage Following Cholecystectomy. JACOB R. BUCHBINDER, Chicago.
Discussion to be opened by JOHN L. YATES, Milwaukee, and JOHN T. BOTTOMLEY, Boston.
20. Nose Plastics. VILRAY PAPIN BLAIR, St. Louis.
Discussion to be opened by FERRIS N. SMITH, Grand Rapids, Mich.; WILLIS D. GATCH, Indianapolis, and ROBERT H. IVY, Philadelphia.
21. Certain Conservative Considerations in the Treatment of Cervical Lymphatic Metastases of Epidermoid Carcinoma. DOUGLAS QUICK, New York.
Discussion to be opened by GORDON NEW, Rochester, Minn., and HENRY K. PANCOAST, Philadelphia.
22. Bone Atrophy. An Experimental and Clinical Study. NATHANIEL ALLISON and BARNEY BROOKS, St. Louis.
Discussion to be opened by CLARENCE A. MCWILLIAMS, New York, and DALLAS B. PHEMISTER, Chicago.
23. Incidence of Cancer in the Remaining Breast After Radical Operation on One Breast. ALSON R. KILGORE, San Francisco.
Discussion to be opened by JOSEPH C. BLOODGOOD, Baltimore, and ROBERT B. GREENOUGH, Boston.
24. Tumors of the Pancreas. CHARLES D. LOCKWOOD, Pasadena, Calif.
Discussion to be opened by JOHN J. GILBRIDE, Philadelphia.

SECTION ON OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY

MEETS IN JORDAN HALL

OFFICERS OF SECTION

Chairman—JOHN O. POLAK, Brooklyn.
Vice Chairman—LUCIUS E. BURCH, Nashville, Tenn.
Secretary—SIDNEY A. CHALFANT, Pittsburgh.
Executive Committee—THOMAS J. WATKINS, Chicago; REUBEN PETERSON, Ann Arbor, Mich.; JOHN O. POLAK, Brooklyn.
(Stenographer—DR. ANNA C. LANDMAN, Chicago)

Wednesday, June 8—9 a. m.

1. The Treatment of Cancer of the Uterus (Lantern Demonstration). HENRY SCHMITZ, Chicago.
2. Ultimate Results of Radium Treatment in Three Hundred Cases of Cancer of the Uterus (Lantern Demonstration). JOHN G. CLARK and FLOYD E. KEENE, Philadelphia.
3. Radium Treatment of Cancer of the Uterus (Lantern Demonstration). REX DUNCAN, Los Angeles.
Discussion to be opened by WILLIAM P. GRAVES, Boston, and CURTIS F. BURMAN, Baltimore.
4. The Relation of the Spleen to the Anemias. WILLIAM J. MAYO, Rochester, Minn.
Discussion to be opened by WILLIAM D. HAGGARD, Nashville, Tenn., and ALBERT J. OCHSNER, Chicago.
5. In What Cases Do Uterine Fibroids Still Require Operative Removal? FREDERICK J. TAUSSIG, St. Louis.
Discussion to be opened by GEORGE G. WARD, JR., New York.
6. The Right of Patients to Diagnosis, Directions and Operative Findings in Writing. ROBERT L. DICKINSON, New York.
Discussion to be opened by FRANK H. LAHEY, Boston.
7. Treatment of Infected Wounds (Lantern Demonstration). THOMAS J. WATKINS, Chicago.
Discussion to be opened by RICHARD R. SMITH, Grand Rapids, Mich.
8. Similarity of the Demands of Local Anesthesia and the Patient's Best Interests (Lantern Demonstration). ROBERT E. FARR, Minneapolis.

Thursday, June 9—9 a. m.

9. Chairman's Address: Our Defects in Obstetric Teaching. JOHN OSBORN POLAK, Brooklyn.
10. The Treatment of Lesions in the Pelvic Genital Organs Associated with Chronic Infections (Lantern Demonstration). W. BLAIR BELL, Liverpool, England.
Discussion to be opened by WALTER W. CHIPMAN, Montreal, Canada.
11. Defective Diet as a Cause of Sterility—A Study Based on Feeding Experiments with Rats. EDWARD REYNOLDS and DONALD MACOMBER, Boston.
12. Cholecystogastrostomy and the Courvoisier Gallbladder. CHAS. G. HEYD, New York.
Discussion to be opened by JOHN B. DEAVER, Philadelphia.
13. Blood Pressure Changes During Abdominal Operations. ALEXIUS MCGLANNAN, Baltimore.
Discussion to be opened by BERTRAM M. BERNHEIM, Baltimore.
14. Review of One Hundred Cases of Women with Pelvic Tuberculosis with Special Reference to the End Results of Operative Treatment. REUBEN PETERSON, Ann Arbor, Mich.
Discussion to be opened by C. JEFF MILLER, New Orleans.
15. The Relation Between the Thyroid Gland and the Female Genital Organs: Specifically the Ovaries. ADDISON G. BRENIZER, Charlotte, N. C.
Discussion to be opened by EDWARD S. JUDD, Rochester, Minn.
16. The Use of the Sigmoid Flexure and Cecum in Pelvic Peritonization. CAREY CULBERTSON, Chicago.
Discussion to be opened by CARL B. DAVIS, Chicago.

Friday, June 10—9 a. m.

Election of officers

17. End Results of Pernatal Care. ALFRED C. BECK, Brooklyn.
Discussion to be opened by IRA L. HILL, New York.
18. Observations on the Differential Diagnosis of Extra-Uterine Pregnancy with a Special Reference to Ovarian and Tubal Hemorrhage Not Associated with Pregnancy. EDWARD A. SCHUMANN, Philadelphia.
Discussion to be opened by J. WESLEY BOVÉE, Washington, D. C.
19. Treatment of the Early and Late Toxemia of Pregnancy. EDWARD P. DAVIS, Philadelphia.
Discussion to be opened by GEORGE W. KOSMAK, New York.
20. Transperitoneal Cesarean Section. Copeland Technic. GORDON G. COPELAND, Toronto, Canada.
Discussion to be opened by WILBER WARD, New York.
21. The Problem of Intracranial Hemorrhage of the New-Born from the Standpoint of the Obstetrician. HUGO EHRENFEST, St. Louis.
Discussion to be opened by ISAAC A. ABT, Chicago.
22. Pregnancy After Nephrectomy (Lantern Demonstration). HARVEY B. MATTHEWS, Brooklyn.
Discussion to be opened by HENRY D. FURNISS, New York.
23. Puerperal Breast Infections. FRANKLIN A. DORMAN, New York.
Discussion to be opened by HOWARD T. SWAIN, Boston.
24. Puerperal Anemia. WALTER W. MANTON, Detroit.
Discussion to be opened by FRANKLIN S. NEWELL, Boston.

SECTION ON OPHTHALMOLOGY

MEETS IN HUNTINGTON HALL

OFFICERS OF SECTION

Chairman—JAMES BORDLEY, JR., Baltimore.
Vice Chairman—MARCUS FEINGOLD, New Orleans.
Secretary—GEORGE S. DERBY, Boston.
Executive Committee—CASSIUS D. WESTCOTT, Chicago; ALLEN GREENWOOD, Boston; JAMES BORDLEY, JR., Baltimore.
(Stenographer—MISS F. E. DILLON, Indianapolis)

Wednesday, June 8—2 p. m.

1. Chairman's Address. JAMES BORDLEY, JR., Baltimore.

SYMPOSIUM ON FOCAL INFECTION

2. The Ophthalmologist an Important Factor in Accurate Diagnosis. WILLIAM S. THAYER, Baltimore.
3. Focal Infection in Its Relation to Diseases of the Eye. FRANK BILLINGS, Chicago.
4. The Paranasal (Accessory) Sinuses in Relation to the Optic Nerve and the Optic Commissure (Lantern Demonstration; Motion Picture Demonstration given in Scientific Exhibit Hall). J. PARSONS SCHAEFFER, Philadelphia.
5. Diseased Teeth as Foci of Infection (Lantern Demonstration). LUCIEN BRUN, Baltimore.
   Discussion to be opened by GEORGE E. DE SCHWEINITZ, Philadelphia; WILLIAM H. WILMER, Washington, D. C.; EDWARD V. L. BROWN, Chicago; LUTHER PETER, Philadelphia.
6. The Position of the Eyeball in the Orbit. EDWARD JACKSON, Denver.
   Discussion to be opened by LUCIEN HOWE, Buffalo.
7. Complete Discission of the Lens by the V-Shaped Method. (Five minutes). S. LEWIS ZIEGLER, Philadelphia.
8. Squint: When Shall We Operate? AARON S. GREEN and LOUIS D. GREEN, San Francisco.
   Discussion to be opened by ALEXANDER DUANE, New York.

Thursday, June 9—2 p. m.

DEMONSTRATION SESSION. EXHIBITION OF NEW INSTRUMENTS AND APPLIANCES

9. Observation on Night Blindness. LIEUT.-COL. HENRY SMITH, C.I.E., I.M.S., London.
10. Immune Reactions Following Injuries to the Uveal Tract. ALAN C. WOODS, Baltimore.
    Discussion to be opened by JAMES G. DWYER, New York.
11. Myasthenia Gravis: Report of Three Cases. WILLIAM CAMPBELL POSEY, Philadelphia.
    Discussion to be opened by E. WYLLYS TAYLOR, Boston.
12. Primary Intraneural Tumors (Gliomas) of the Optic Nerve (Motion Picture Demonstration given in Scientific Exhibit Hall). FREDERICK H. VERHOEFF, Boston.
    Discussion to be opened by MARCUS FEINGOLD, New Orleans.
13. The Correction of Cicatricial Ectropion by the Use of True Skin of the Upper Lid. JOHN M. WHEELER, New York.
    Discussion to be opened by WALTER B. LANCASTER, Boston.
14. Plastic Repair of the Eyelids by Pedunculated Skin Grafts (Lantern Demonstration). GEORGE H. CROSS, Chester, Pa.
    Discussion to be opened by VILRAY P. BLAIR, St. Louis.
15. Quantitative Determination of Aqueous Humor Absorption of Cocain and Atropin. LAWRENCE POST, St. Louis.
    Discussion to be opened by WILLIAM F. HARDY, St. Louis.

Friday, June 10—2 p. m.

Election of Officers
Reports of Committees

16. Senile Cataract Extraction. WALTER R. PARKER, Detroit.
    Discussion to be opened by EDWARD C. ELLETT, Memphis, Tenn.
17. The Prevention of Postoperative Intra-Ocular Infections. GEORGE H. BELL, New York.
    Discussion to be opened by WALTER E. LAMBERT, New York.
18. Agricultural Conjunctivitis. JAMES M. PATTON and SANFORD R. GIFFORD, Omaha.
    Discussion to be opened by EDWIN N. ROBERTSON, Concordia, Kan.
19. The Relation of the Blind Spot to Medullated Nerve Fibers in the Retina. HARRY S. GRADLE, Chicago.
    Discussion to be opened by WILLIAM ZENTMAYER, Philadelphia.
20. The Repair of Scleral Wounds Including Scleral Rupture, Near the Limbus (Five minutes). LEE MASTEN FRANCIS, Buffalo.
21. An Operation for the Relief of Anterior Staphyloma, Partial or Complete (Five minutes). ARTHUR S. TENNER, New York.

SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY

MEETS IN HUNTINGTON HALL

OFFICERS OF SECTION

Chairman—ROSS H. SKILLERN, Philadelphia.
Vice Chairman—RICHMOND MCKINNEY, Memphis, Tenn.
Secretary—WILLIAM B. CHAMBERLIN, Cleveland.
Executive Committee—LEE WALLACE DEAN, Iowa City; JOSEPH BECK, Chicago; ROSS H. SKILLERN, Philadelphia.
(Stenographer—MISS F. E. DILLAN, Indianapolis)

Wednesday, June 8—9 a. m.

1. Chairman's Address. ROSS HALL SKILLERN, Philadelphia.
2. Retrobulbar Neuritis, Secondary to Diseases of the Nasal Sinuses. H. H. STARK, El Paso, Texas.
   Discussion to be opened by JAMES BORDLEY, JR., Baltimore, and EDWARD C. ELLET, Memphis, Tenn.
3. Pulmonary Abscess in Adults Following Tonsillectomy Under General Anesthesia. LEWIS FISHER and A. J. COHEN, Philadelphia.
   Discussion to be opened by SYDNEY YANKAUER, New York.
4. The Borderland of Rhinology, Neurology and Ophthalmology. GREENFIELD SLUDER, St. Louis.
   Discussion to be opened by CHARLES H. FRAZIER, Philadelphia.
5. Causes of Failure in the Frontal Sinus Operation. THOMAS J. HARRIS, New York.
   Discussion to be opened by JOSEPH A. STUCKY, Lexington, Ky.
6. Scopolamin and Morphin as an Advantageous Preliminary to Local Anesthesia. LEE M. HURD, New York.
   Discussion to be opened by WILLIAM L. GATEWOOD, New York.
7. The Ear and Sinus Complications of Influenza. WALTER E. BROWN, Pittsburgh.
   Discussion to be opened by CHARLES F. ADAMS, Trenton, N. J.

Thursday, June 9—9 a. m.

8. Intranasal Reconstruction (Lantern Demonstration). JOHN A. PRATT and FREDERICK J. PRATT, Minneapolis.
   Discussion to be opened by EDWIN MCGINNIS, Chicago.
9. Removal of a Vocal Cord for the Prevention of Asphyxiation from Permanent Abductor Paralysis. CHARLES H. BAKER, Bay City, Mich.
   Discussion to be opened by GEORGE L. RICHARDS, Fall River, Mass.
10. Endoscopic Removal of Sand Burrs from the Larynx and Tracheobronchial Tree. H. MARSHALL TAYLOR, Jacksonville, Fla.
    Discussion to be opened by RICHMOND MCKINNEY, Memphis, Tenn.
11. Prognosis of Foreign Bodies in the Lung. CHEVALIER JACKSON, Philadelphia.
    Discussion to be opened by LEE WALLACE DEAN, Iowa City.
12. Bronchoscopic Studies of Pulmonary Abscess. HENRY L. LYNAH, New York.
    Discussion to be opened by WILLIAM H. STEWART, New York.
13. The Endobronchial Treatment of Bronchial Asthma and Asthmatic Bronchitis. MARK J. GOTTLIEB, New York.
    Discussion to be opened by WOLFF FREUDENTHAL, New York.

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Friday, June 10—9 a. m.

Election of Officers

EXHIBITION OF NEW INSTRUMENTS AND APPLIANCES

Report of Committees

14. Acute Retropharyngeal Abscess.
IRA FRANK, Chicago.
Discussion to be opened by HARRY GRADLE, Chicago.

15. Microscopical Proof of Malignant Disease of the Head and Neck, Treated by Combination of Surgery and Radium. JOSEPH C. BECK, Chicago.
Discussion to be opened by GORDON B. NEW, Rochester, Minn.

16. A Case of Cerebellar Abscess with Very Unusual Features. Operation. Recovery. JOHN MCCOY, New York.
Discussion to be opened by MARCUS NEUSTAEDTER, New York.

17. The Problem of the Hard of Hearing and Electrical Hearing Devices. GEORGE E. SHAMBAUGH, Chicago.

18. Needed Measures for the Prevention of Deafness During Early Life. HAROLD HAYS, New York.
Discussion on papers 17, 18 and 19 to be opened by B. ALEXANDER RANDALL, Philadelphia; WENDELL C. PHILLIPS, New York, and MAX A. GOLDSTEIN, St. Louis.

19. Social Alleviations of Adventitious Deafness.
ANNETTE W. PECK, New York.

SECTION ON DISEASES OF CHILDREN

MEETS IN CONVENTION HALL

OFFICERS OF SECTION

Chairman—FRANK C. NEFF, Kansas City, Mo.
Vice Chairman—WILLIAM WESTON, Columbia, S. C.
Secretary—E. C. FLEISCHNER, San Francisco.
Executive Committee—FRANKLIN P. GENGENBACH, Denver; FRITZ B. TALBOT, Boston; FRANK C. NEFF, Kansas City, Mo.
(Stenographer—DR. W. W. BELLAMY, Boston)

Wednesday, June 8—2 p. m.

1. Chairman's Address: The Section on Diseases of Children. FRANK C. NEFF, Kansas City, Mo.
2. The Physiology of the Blood in Infancy and Childhood.
WILLIAM PALMER LUCAS, San Francisco.
3. Relation of Posture to the Health of the Child.
FRANK D. DICKSON, Kansas City, Mo.
4. The Rôle of Fatigue in Malnutrition of Children.
BORDEN S. VEEDER, St. Louis.
5. Heart Disease in Children of School Age.
ROBERT H. HALSEY, New York.
6. The Treatment of Furunculosis in Infants.
CLIFFORD G. GRULEE and CASSIE BELLE ROSE, Chicago.
7. The Beneficial Effects of Tonsillectomy upon Cyclic Vomiting and Allied Affections.
ALBERT H. BYFIELD, Iowa City.

Thursday, June 9—2 p. m.

SYMPOSIUM ON THE COMMUNICABLE DISEASES

8. Diagnosis and Transmission of Infectious Diseases.
D. L. RICHARDSON, Providence, R. I.
9. Certain Aspects of Postdiphtheritic Diaphragmatic Paralysis.
HAROLD R. MIXSELL and EMANUEL GIDDINGS, New York.
10. Studies on Diphtheria.
JOHN HOWLAND and HUGH JOSEPHS, Baltimore.
11. Experimental Measles. FRANCIS G. BLAKE, New York.
12. Preventive Diphtheria Work in the Public Schools of New York City. ABRAHAM ZINGHER, New York.
13. Experience with More Than a Hundred Cases of Epidemic Encephalitis in Children.
JOSEPHINE B. NEAL, New York.
14. Paralysis in Children Due to the Bite of Wood-Ticks.
P. D. MCCORNACK, Spokane, Wash.

Friday, June 10—2 p. m.

Election of Officers

15. Visualizing the Child's Physical Condition: A Method Especially Adapted to Preventive Work.
C. E. CARTER, Los Angeles.
16. The Food Requirements of the New-Born Infant.
H. K. FABER, San Francisco.
17. The Breast and the Nursing Child.
FRANK H. RICHARDSON, Brooklyn.
18. Some Neglected Practical Points in the Technic of Infant Feeding. JOSEPH S. BRENNEMANN, Chicago.
19. Diet as a Factor in the Etiology of Adenoids.
FRANK VAN DER BOGART, Schenectady, N. Y.
20. Regional Sensitivity of the Skin of Normal Infants.
L. W. SAUER, Evanston, Ill.
21. The Clinical Diagnosis of Heredosyphilis.
HENRY F. STOLL, Hartford, Conn.

SECTION ON PHARMACOLOGY AND THERAPEUTICS

MEETS IN HARVARD MEDICAL SCHOOL

OFFICERS OF SECTION

Chairman—LEONARD G. ROWNTREE, Rochester, Minn.
Vice Chairman—CARL VOEGTLIN, Washington, D. C.
Secretary—CARY EGGLESTON, New York.
Executive Committee—WALTER A. BASTEDO, New York; GEORGE W. MCCOY, Washington, D. C.; LEONARD G. ROWNTREE, Rochester, Minn.
(Stenographer—DR. ANNA C. LANDMAN, Chicago)

Wednesday, June 8—2 p. m.

1. Chairman's Address.
LEONARD G. ROWNTREE, Rochester, Minn.
2. The Value of Drugs in Internal Medicine.
LEWELLYS F. BARKER, Baltimore.
Discussion to be opened by HENRY A. CHRISTIAN and FRANCIS H. MCCRUDDEN, Boston.
3. The Value of Drugs in Surgery.
GEORGE W. CRILE, Cleveland.
Discussion to be opened by JOHN A. HARTWELL, New York.
4. The Value of Drugs in Pediatrics.
HENRY F. HELMHOLZ, Rochester, Minn.
Discussion to be opened by F. PAUL GENGENBACH, Denver, and Richard M. Smith, Boston.
5. The Value of Drugs in Ophthalmology.
WILLIAM H. WILMER, Washington, D. C.
Discussion to be opened by ROBERT G. REESE, New York.
6. The Value of Drugs in Urology.
HUGH H. YOUNG, Baltimore.
7. The Value of Drugs in Neurology.
C. MACFIE CAMPBELL, Boston.
Discussion to be opened by FOSTER KENNEDY, New York.

Thursday, June 9—9 a. m.

JOINT MEETING OF SECTIONS ON PRACTICE OF MEDICINE, PHARMACOLOGY AND THERAPEUTICS AND PATHOLOGY AND PHYSIOLOGY

Meeting Place—Convention Hall

SYMPOSIUM ON BASAL METABOLISM IN CLINICAL MEDICINE

For program, see page 1454.

Friday, June 10—2 p. m.

Election of Officers.

14. Flatulence in the Decompensation of Cardiac Disease: Etiology and Treatment.
THOMAS F. REILLY, New York.
Discussion to be opened by FRANK SMITHIES, Chicago.
15. The Effect to Digitalis on the Response of the Cardiac Pacemaker (Lantern Demonstration).
BENJAMIN H. SCHLOMOVITZ, Milwaukee.
16. Drugs of the Digitalis Group with Special Reference to the Action of Apocynum and Convallaria.
PAUL D. WHITE, Boston.
Discussion to be opened by ROBERT A. HATCHER, New York; JOSEPH H. PRATT, Boston, and CARY EGGLESTON, New York.
17. A Study of Local Anesthetics in Relation to Genito-Urinary Organs. DAVID I. MACHT, Baltimore.

18. The Treatment of Carbon Monoxid Poisoning.
YANDELL HENDERSON and HOWARD W. HAGGARD, New Haven, Conn.
Discussion to be opened by ROYD R. SAYERS, Washington, D. C.
19. The Prevention of Simple Goiter in Man.
DAVID MARINE, New York, and OLIVER P. KIMBALL, Youngstown, Ohio.
Discussion to be opened by MILTON J. ROSENAU, Boston.
20. The Treatment of Bronchial Asthma.
ROBERT A. COOKE, New York.
Discussion to be opened by I. CHANDLER WALKER, Boston.
21. The Chemical Studies in the Treatment of Arthritis (Lantern Demonstration).
ARTHUR F. CHACE, Boston, VICTOR C. MYERS and J. A. KILLIAN, New York.
Discussion to be opened by RALPH PEMBERTON, Philadelphia.
22. Therapeutic Value of Chaulmoogra Oil and Derivatives in Experimental Tuberculosis.
CARL VOEGTLIN, M. I. SMITH and JAMES M. JOHNSON, Washington, D. C.
Discussion to be opened by PHILIP KING BROWN and E. L. WALKER, San Francisco.

SECTION ON PATHOLOGY AND PHYSIOLOGY

MEETS IN HARVARD MEDICAL SCHOOL

OFFICERS OF SECTION

Chairman—EDWIN R. LE COUNT, Chicago.
Vice Chairman—WILLIAM S. CARTER, Galveston, Tex.
Secretary—JOSIAH J. MOORE, Chicago.
Executive Committee—JAMES EWING, New York; LOUIS B. WILSON, Rochester, Minn.; FRANCIS CARTER WOOD, New York; HOWARD T. KARSNER, Cleveland; EDWIN R. LE COUNT, Chicago.
(Stenographer—MRS. M. C. REPP, Philadelphia)

Wednesday, June 8—9 a. m.

1. Chairman's Address. EDWIN R. LE COUNT, Chicago.
2. The Action of Radium and Roentgen Rays on Normal and Diseased Lymphoid Tissue.
ISAAC LEVIN, New York.
3. Organ Stimulation by Roentgen Rays.
WILLIAM F. PETERSEN and CLARENCE SAELHOF, Chicago.
4. The Influence of Light on Uranium Poisoning.
HOWARD T. KARSNER and T. SHEN, Cleveland.
5. The Removal of the Liver.
FRANK C. MANN and THOMAS B. MAGATH, Rochester, Minn.
6. Intestinal and Hepatic Reactions in Anaphylaxis.
W. H. MANWARING, Stanford University, Calif.
7. Hypersensitiveness in Pulmonary Tuberculosis to Both Exotoxins and Endotoxins of the Tubercle Bacillus.
MYER SOLIS COHEN, Philadelphia.
8. Standardization of the Wassermann Reaction.
JOHN A. KOLMER, Philadelphia.

Thursday, June 9—9 a. m.

JOINT MEETING OF SECTIONS ON PRACTICE OF MEDICINE, PHARMACOLOGY AND THERAPEUTICS AND PATHOLOGY AND PHYSIOLOGY

Meeting Place—Convention Hall

SYMPOSIUM ON BASAL METABOLISM IN CLINICAL MEDICINE

For program see page 1454.

Friday, June 10—9 a. m.

Election of Officers

15. Reticulosis (Increased Percentage of Reticulated Erythrocytes in the Peripheral Blood).
EDWARD B. KRUMBHAAR, Philadelphia.
16. Minimal Renal Lesions Associated with Hypertension.
ELI MOSCHCOWITZ, New York.
17. Symptoms Referable to the Etiologic Pathology in Diabetes.
FREDERICK M. ALLEN and JAMES W. SHERRILL, Morristown, N. J.
18. A Statistical Study of 321 Aneurysms.
BALDWIN LUCKE and MARION H. REA, Philadelphia.
19. Granuloma Inguinale.
KENNETH M. LYNCH, Charleston, S. C.
20. Spirochetal Pulmonary Gangrene.
B. S. KLINE, New York.
21. Comparative Results of the Ligation of the Hepatic Artery in Animals: Its Application to Man.
MOSES BEHREND and AMMON G. KERSHNER, Philadelphia.
22. Epithelioma of the Genito-Urinary Organs.
ALBERT C. BRODERS, Rochester, Minn.

SECTION ON STOMATOLOGY

MEETS IN RECEPTION HALL, MECHANICS BUILDING

OFFICERS OF SECTION

Chairman—HENRY S. DUNNING, New York.
Vice Chairman—HERBERT A. POTTS, Chicago.
Secretary—ARTHUR D. BLACK, Chicago.
Executive Committee—EUGENE S. TALBOT, Chicago; VILRAY P. BLAIR, St. Louis; HENRY S. DUNNING, New York.
(Stenographer—MISS MARGARET I. MALONEY, Chicago)

Wednesday, June 8—9 a. m.

1. Chairman's Address. What Do We Mean by Oral Surgery? HENRY S. DUNNING, New York.
2. Is There an Educational Program in Dentistry?
CHARLES R. TURNER, Philadelphia.
3. Postgraduate Instruction in the Several Specialties.
WILLIAM C. FISHER, New York.
Discussion on papers 1, 2 and 3 to be opened by EUGENE S. TALBOT, Chicago.
4. Histopathology of the Apical Region of Teeth with Partially Filled Root Canals (Lantern Demonstration).
EDWARD H. HATTON, Chicago.
5. Further Studies on Focal Infection and Elective Localization. EDWARD C. ROSENOW, Rochester, Minn.
6. The Relation of Edentulous Jaws to Systemic Diseases (Lantern Demonstration).
CHARLES A. TEIFER, Muskegon, Mich.
Discussion on papers 4, 5 and 6 to be opened by ERNEST E. IRONS and FREDERICK B. NOYES, Chicago.

Thursday, June 9—9 a. m.

7. Dentigerous or Follicular Cyst.
RAYMOND J. WENKER, Milwaukee.
8. Etiology and Pathology of Cysts of the Upper Jaw.
GEORGE M. DORRANCE, Philadelphia.
9. Mandibular Tumors. JOSEPH A. PETTIT, Portland, Ore.
10. Central Tumors of the Lower Jaw (Lantern Demonstration). JOSEPH C. BLOODGOOD, Baltimore.
11. Report of a Case of Cephalic Chancroid, and a Case of Bacteremia with Encephalitis (Lantern Demonstration).
HERBERT A. POTTS, Chicago.
Discussion on papers 7, 8, 9, 10 and 11 to be opened by THOMAS L. GILMER, Chicago, and ROBERT H. IVY, Philadelphia.

Friday, June 10—9 a. m.

Election of Officers

12. The Principles Involved in the Surgical Correction of Cleft-Palate and Hare-Lip.
FREDERICK B. MOOREHEAD, Chicago.
13. The Nasal Relation of Harelip Operations (Lantern Demonstration). GEORGE V. I. BROWN, Milwaukee.
Discussion on papers 12 and 13 to be opened by VILRAY P. BLAIR, St. Louis, and MORRIS I. SCHAMBERG, New York.
14. Notes on Plastic Surgery of the Lips.
V. H. KAZANJIAN, Boston.
15. The Epidermic Inlay (Motion Picture Demonstration Given in Scientific Exhibit Hall).
JOSEPH D. EBY, New York.
Discussion on papers 14 and 15, to be opened by JOSEPH BECK, Chicago.
16. The Determination of the Oxygen Need in Anesthesia.
WILLIAM I. JONES, Columbus, Ohio.
17. Trigeminal Neuralgia. S. L. SILVERMAN, Atlanta, Ga.

SECTION ON NERVOUS AND MENTAL DISEASES

MEETS IN PAUL REVERE HALL

OFFICERS OF SECTION

Chairman—ARTHUR S. HAMILTON, Minneapolis.
Vice Chairman—WALTER TIMME, New York.
Secretary—CHARLES W. HITCHCOCK, Detroit.
Executive Committee—CHARLES EUGENE RIGGS, St. Paul; ARCHIBALD CHURCH, Chicago; ARTHUR S. HAMILTON, Minneapolis.
(Stenographer—MISS EDITH B. PHELPS, New York)

Wednesday, June 8—9 a. m.

1. Chairman's Address: Postgraduate Training in Neuropsychiatry. ARTHUR S. HAMILTON, Minneapolis.
2. Incipient Epilepsy, Its Diagnosis and Treatment. EDWARD A. TRACY, Boston.
3. The Use of Experimental Psychology in the Practice of Medicine. EDMUND JACOBSON, Chicago.
4. Some Personal Experiences with Cases of Myasthenia Gravis. ISADOR H. CORIAT, Boston.
5. The Psychic Factor in Exophthalmic Goiter (Motion Picture Demonstration Given in Scientific Exhibit Hall). ISRAEL BRAM, Philadelphia.
6. Report of a Case of Family Periodic Paralysis. MARCUS NEUSTAEDTER, New York.

Thursday, June 9—9 a. m.

7. Clinical Types of Congenital Neurosyphilis (Lantern Demonstration). KARL A. MENNINGER, Topeka, Kan.
8. Calcification of the Cerebral Vessels Producing Clinical Syndrome Mistaken for Brain Tumor (Lantern Demonstration). PETER BASSOE and GEORGE B. HASSIN, Chicago.
9. An Address on Neurology. RICHARD ROWS, London.
10. Medical Significance of the Disorders of Speech. SMILEY BLANTON, Madison, Wis.
11. Psychotherapy. CHARLES R. BALL, St. Paul.
12. Subjective Signs in Diagnosis. TOM A. WILLIAMS, Washington, D. C.
13. Psychiatry as a Dynamic Social Factor. FRANKWOOD E. WILLIAMS, New York.

Friday, June 10—9 a. m.

Election of Officers

14. War Neuroses and Allied Conditions Manifest in Ex-Service Men as Observed in U. S. P. H. S. Hospitals for Psychoneurotics. GEORGE H. BENTON, Waukesha, Wis.
15. The Sequelae of Encephalitis Lethargica. EDWARD LIVINGSTON HUNT, New York.
16. An Address on Neurology. PIERRE JANET, Paris.
17. Developments in the Treatment of Syphilis of the Central Nervous System. ISRAEL STRAUSS and DAVID J. KALISKI, New York.
18. The Static System and Its Relations to Symptomatology. J. RAMSAY HUNT, New York.
19. Quantitative Estimation of Cerebrospinal Fluid Proteid. JAMES B. AYER and HAROLD E. FOSTER, Boston.
20. Tumors of Gasserian Ganglion, Report of Cases. WALTER D. SHELDEN, Rochester, Minn.

SECTION ON DERMATOLOGY AND SYPHILOLOGY

MEETS IN TALBOT HALL

OFFICERS OF SECTION

Chairman—WALTER J. HIGHMAN, New York.
Vice Chairman—EVERETT S. LAIN, Oklahoma City.
Secretary—HAROLD N. COLE, Cleveland.
Executive Committee—OTTO H. FORRSTER, Milwaukee; OLIVER S. ORMSBY, Chicago; WALTER J. HIGHMAN, New York.
(Stenographer—MRS. IRENE H. SNYDER, CHICAGO)

Wednesday, June 8—2 p. m.

1. Chairman's Address: Syphilis as a Rural Problem. WALTER J. HIGHMAN, New York.

SYMPOSIUM ON SYPHILIS

2. Sarcoid and Syphilis (Lantern Demonstration). ARTHUR WILLIAM STILLIANS, Chicago.
3. Clinical Manifestation of Disease as an Index to the Defensive Reaction of Animals Infected with Spirochaeta Pallida (Lantern Demonstration). WADE H. BROWN and LOUISE PEARCE, New York.
4. Three Hundred Cases of Syphilis After Five Years. HARRY G. IRVINE, Minneapolis.
5. Lesions of the Suprarenals in Latent Syphilis (Lantern Demonstration). ALDRED S. WARTHIN, Ann Arbor, Mich.
6. The Visceral Changes in Congenital Syphilis (Lantern Demonstration). J. FRANK FRASER, New York.
7. An Analysis of 1,000 Cases of Syphilis in Which Lumbar Puncture Was Performed. JOHN A. FORDYCE, ISADORE ROSEN and ELIZABETH C. JAGLE, New York.
8. Neurosyphilis with Particular Reference to Cases Having Negative Spinal Fluid—The Question of Spontaneous Cure or Abortion of Neurosyphilis. HARRY C. SOLOMON, Boston, and JOSEPH V. KLAUDER, Philadelphia.
9. A Study of Silver Arsphenamin in the Treatment of Syphilis, Based on 3,000 Injections. MIHRAN B. PAROUNAGIAN, New York.
Discussion to be opened by J. FRANK SCHAMBERG, Philadelphia; UDO J. WILE, Ann Arbor, Mich., and JOHN H. STOKES, Rochester, Minn.

Thursday, June 9—2 p. m.

10. The Moulage Clinic (Exhibit in Scientific Exhibit). J. FRANK WALLIS, Washington, D. C.
11. Streptococcic Dermatoses. ERNEST DWIGHT CHIPMAN, San Francisco.
12. The Dermatologic Symptoms of Endocrine Dysfunction. PAUL E. BECHET, New York.
13. Practical Suggestions for the Treatment of Several Forms of Eczema. DAVID LIEBERTHAL, Chicago.
14. The Roentgen-Ray Treatment of Acne Vulgaris. HENRY H. HAZEN and FRANK J. EICHENLAUB, Washington, D. C.
15. A Rare Form of Suppurating and Cicatrizing Disease of the Scalp (Perifolliculitis capitis abscedens et suffodiens) (Lantern Demonstration). FRED WISE and HOWARD J. PARKHURST, New York.
16. Xanthoma Tuberosum Multiplex in Childhood with Visceral Involvement. FRANK CROZER KNOWLES and HENRY M. FISHER, Philadelphia.
17. The Toxin Treatment of Dermatitis Venenata. ALBERT STRICKLER, Philadelphia.

Friday, June 10—2 p. m.

Election of Officers

SYMPOSIUM ON MALIGNANCIES

18. The Therapeutic Aspect of Radiation in Superficial Malignancies (Lantern Demonstration). ALBERT SOILAND, Los Angeles.
19. A Clinical Study of Carcinoma of the Nose. RICHARD L. SUTTON, Kansas City, Mo.
20. Primary Sarcoma of the Lip (Lantern Demonstration). SAMUEL E. SWEITZER and HENRY E. MICHELSON, Minneapolis.
Discussion to be opened by MARTIN ENGMAN, St. Louis.

SYMPOSIUM ON DERMATOPHYTES

21. Epidermophytosis. CHARLES J. WHITE and ARTHUR M. GREENWOOD, Boston.
22. Studies on the Culture of Cutaneous Fungi. FRED D. WEIDMAN and THOMAS M. MCMILLAN, Philadelphia.
23. Treatment of Ringworm of the Scalp and Beard with Special Reference to Roentgen Ray. HOWARD FOX and THOMAS B. H. ANDERSON, New York.
Discussion to be opened by JAMES H. MITCHELL, Chicago, and GEORGE M. MCKEE, New York.
24. Porokeratosis, with Report of a Case. CARROLL S. WRIGHT, Ann Arbor, Mich.
Discussion to be opened by GROVER WENDE, Buffalo.
25. Biochemical Studies in the Diseases of the Skin: II. Acne Vulgaris. OSCAR L. LEVIN and MAX KAHN, New York.

SECTION ON PREVENTIVE MEDICINE AND PUBLIC HEALTH

MEETS IN HARVARD MEDICAL SCHOOL

OFFICERS OF SECTION

Chairman—JOHN D. MCLEAN, Philadelphia.
Vice Chairman—CLARENCE D. SELBY, Toledo, Ohio.
Secretary—WALLER S. LEATHERS, University, Miss.
Executive Committee—CLARENCE ST. CLAIR DRAKE, Springfield, Ill.; JAMES A. HAYNE, Columbia, S. C.; JOHN D. MCLEAN, Philadelphia.

(Stenographer—MR. H. A. EDGECOMB, BOSTON)

Wednesday, June 8—9 a. m.

1. Chairman's Address. JOHN D. MCLEAN, Philadelphia.
2. The Health Work of the American Red Cross.
   LIVINGSTON FARRAND, Washington, D. C.
   Discussion to be opened by ALLEN W. FREEMAN, Columbus, Ohio; HAVEN EMERSON, New York; CHARLES J. HATFIELD, Philadelphia, and DONALD B. ARMSTRONG, Framingham, Mass.
3. Cooperation Between a Central State Laboratory and Local Municipal and County Laboratories.
   AUGUSTUS B. WADSWORTH, Albany, N. Y.
   Discussion to be opened by WILLIAM H. PARK, New York, and OLIN WEST, Nashville, Tenn.
4. Measures for Increasing the Supply of Competent Health Officers. JOHN A. FERRELL, New York.
   Discussion to be opened by MILTON ROSENAU, Boston; DAVID L. EDSALL, Boston, and WILLIAM H. WELCH, Baltimore.
5. Public Health and Private Practice.
   LESLIE L. LUMSDEN, Washington, D. C.
   Discussion to be opened by FRANK BILLINGS, Chicago, and VICTOR VAUGHAN, Ann Arbor, Mich.
6. The Relation of the Child to Hospital Social Service.
   HENRY DWIGHT CHAPIN, New York.
   Discussion to be opened by HENRY I. BOWDITCH and FRITZ B. TALBOT, Boston; WILLIAM A. EVANS, Chicago, and J. ROSS SNYDER, Birmingham, Ala.
7. Obstetric Deaths—Their Cause and Control.
   BARTON COOK HIRST, Philadelphia.
   Discussion to be opened by OSCAR DOWLING, New Orleans, and JAMES A. HAYNE, Columbia, S. C.

Thursday, June 9—9 a. m.

8. The State's Standard of Child Health.
   EDITH B. LOWRY, St. Charles, Ill.
   Discussion to be opened by RICHARD M. SMITH, Boston; SARA JOSEPHINE BAKER, New York, and MERRILL E. CHAMPION, Boston.
9. The Control of Communicable Diseases: Federal, Municipal and State.
   ALLAN J. MCLAUGHLIN, Washington, D. C.
   Discussion to be opened by ENION G. WILLIAMS, Richmond, Va., and SAMUEL J. CRUMBINE, Topeka, Kan.
10. Communicable Diseases of Childhood and Their Control.
    HUGH O. JONES, Chicago.
    Discussion to be opened by EUGENE KELLY, Boston, and ARTHUR T. MCCORMACK, Louisville, Ky.
11. Sequelae of the Communicable Diseases of Childhood.
    ISAAC A. ABT, Chicago.
    Discussion to be opened by MATTHIAS NICOLL, JR., Albany, N. Y., and JOHN DILL ROBERTSON, Chicago.
12. Morbidity Conclusions with Reference to the Diseases of Childhood. WILMER R. BATT, Harrisburg, Pa.
    Discussion to be opened by FREDERICK L. HOFFMAN, Newark, N. J., and WALTER A. PLECKER, Richmond, Va.
13. How to Arrest the Increasing Degeneracy of the Race.
    WALTER O. HENRY, Los Angeles.
    Discussion to be opened by HOWARD A. KELLY, Baltimore, and WILLIAM J. ROBINSON, New York.

Friday, June 10—9 a. m.

Election of Officers

14. Three Years of Progress in Health Organization in Ohio.
    ALLEN W. FREEMAN, Columbus, Ohio.
    Discussion to be opened by OTTO P. GEIER, Cincinnati, and ROGER G. PERKINS, Cleveland.
15. Diphtheria Control. BERNARD W. CAREY, Boston.
    Discussion to be opened by JOHN T. BLACK, Hartford, Conn., and C. ST. CLAIR DRAKE, Springfield, Ill.
16. Laryngeal Diphtheria. JOHN F. HOGAN, Baltimore.
    Discussion to be opened by SAMUEL W. WELCH, Montgomery, Ala., and CHARLES F. DALTON, Burlington, Vt.
17. Fundamental Factors in the Control of Tuberculosis with Special Reference to the Sanatorium.
    HENRY BOSWELL, Sanatorium, Miss.
    Discussion to be opened by WATSON S. RANKIN, Raleigh, N. C., and DAVID R. LYMAN, Wallingford, Conn.
18. The Relation of Unrecognized Infections to the Production of "Carriers" of Pathogenic Organisms.
    CHARLES F. CRAIG, Washington, D. C.
    Discussion to be opened by HENRY J. NICHOLS, Washington, D. C., and CHARLES C. BASS, New Orleans.
19. Medical Results of the Framingham Community Health and Tuberculosis Demonstration.
    DONALD B. ARMSTRONG and PHILIP C. BARTLETT, Framingham, Mass.
    Discussion to be opened by ROGER I. LEE and EDWARD O. OTIS, Boston.

SECTION ON UROLOGY

MEETS IN TALBOT HALL

OFFICERS OF SECTION

Chairman—RICHARD F. O'NEIL, Boston.
Vice Chairman—JOSEPH HUME, New Orleans.
Secretary—HERMAN L. KRETSCHMER, Chicago.
Executive Committee—WILLIAM F. BRAASCH, Rochester, Minn.; WILLIAM E. LOWER, Cleveland; RICHARD F. O'NEIL, Boston.

(Stenographer—MRS. IRENE H. SNYDER, CHICAGO)

Wednesday, June 8—9 a. m.

1. Urology and the General Practitioner (Lantern Demonstration). E. OTIS SMITH, Cincinnati.
   Discussion to be opened by WILLIAM C. QUINBY, Boston, and OLIVER LYONS, Denver.
2. Pneumoperitoneum as an Aid in the Roentgenologic Diagnosis of Lesions of the Urinary Tract (Lantern Demonstration). LE ROY SANTE, St. Louis.
   Discussion to be opened by WILLIAM H. STEWART, New York.
3. The Value and Reliability of Guinea-Pig Inoculations in Renal Tuberculosis.
   ABRAHAM HYMAN and LEWIS T. MANN, New York.
   Discussion to be opened by JAMES D. BARNEY, Boston.
4. Modern Methods of Diagnosis and Treatment of Pathologic Conditions of the Urinary Tract in Children (Lantern Demonstration).
   WILLIAM E. STEVENS, San Francisco.
   Discussion to be opened by HERMAN L. KRETSCHMER, Chicago.
5. Findings Outside the Urinary Tract as the Doubtful Causes of Urinary Symptoms.
   LOUIS E. SCHMIDT, Chicago.
   Discussion to be opened by ALBERT L. CHUTE, Boston, and JOHN GERAGHTY, Baltimore.
6. Factors Which Influence the Results and Mortality of Kidney Surgery (Lantern Demonstration).
   JOHN R. CAULK, St. Louis.
   Discussion to be opened by BENTLEY SQUIER, New York.
7. A Study of the Phenolsulphonephthalein Concentration in Urine After Intravenous Injection, with Special Reference to Urines Obtained by Ureter Catheter.
   EDWARD L. KEYES, JR., and HERBERT MOHAN, New York.
   Discussion to be opened by JOHN T. GERAGHTY, Baltimore.
8. The Rôle of Foci Infection in Cases of Pyelonephritis (Lantern Demonstration).
   HERMAN C. BUMPUS and J. C. MEISSER, Rochester, Minn.
   Discussion to be opened by ERNEST G. CRABTREE, Boston.
9. Lavage of the Renal Pelvis—An Experimental Study (Lantern Demonstration).
   VINCENT J. O'CONOR, Chicago.
   Discussion to be opened by WILLIAM C. QUINBY, Boston.

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Thursday, June 9—9 a. m.

10. Experience with Young's Perineal Prostatectomy (Lantern Demonstration).
FRANK HINMAN, San Francisco.
Discussion to be opened by HUGH H. YOUNG, Baltimore.

11. The Clinical Expression of Internal Secretion of the Prostate in Prostatic Hypertrophy.
HOMER G. HAMER and HENRY O. MERTZ, Indianapolis.
Discussion to be opened by EDWARD L. KEYES, JR., New York, and HARRY A. FOWLER, Washington, D. C.

12. Prostatectomy in Bad Surgical Risks (Lantern Demonstration). HENRY G. BUGBEE, New York.
Discussion to be opened by HERMAN L. KRETSCHMER, Chicago.

13. Adenocarcinoma of the Bladder with Report of a Case (Lantern Demonstration).
ROBERT H. HERBST and ALVIN THOMPSON, Chicago.
Discussion to be opened by OSWALD S. LOWSLEY, New York.

14. The Technical Treatment of Carcinoma of the Bladder and Prostate by Electrocoagulation and Radium Implantation (Lantern Demonstration).
BENJAMIN A. THOMAS and GEORGE E. PFAHLER, Philadelphia.
Discussion to be opened by JOHN GERAGHTY, Baltimore.

15. The Radium Therapy of Teratoid Tumors of the Testis (Lantern Demonstration).
BENJAMIN S. BARRINGER, New York.
Discussion to be opened by EDWARD L. KEYES, JR., New York.

Friday, June 10—9 a. m.

Election of Officers

16. The Structural Basis for Congenital Valve in the Posterior Urethra: An Etiologic Study (Lantern Demonstration).
ERNEST M. WATSON, Buffalo.
Discussion to be opened by WILLIAM C. QUINBY, Boston.

17. Urethroscopic Findings in Functional Disorders of the Genito-Urinary Tract.
ABRAHAM L. WOLBARST, New York.
Discussion to be opened by LEO BUERGER, New York, and CHARLES M. HARPSTER, Toledo, Ohio.

18. Seminal Vesiculitis. Symptomatology, Differential Diagnosis, Treatment and Bacteriologic Studies.
EDWARD W. WHITE, Chicago, and RUTHERFORD B. H. GRADWOHL, St. Louis.
Discussion to be opened by ROBERT H. HERBST, Chicago, and GEORGE R. LIVERMORE, Memphis, Tenn.

19. Study of Cases of Bilateral Renal Calculi. Indications and Contraindications for Operation (Lantern Demonstration). JOHN T. GERAGHTY, Baltimore.
Discussion to be opened by JOHN H. CUNNINGHAM, Boston, and FRANCIS R. HAGNER, Washington, D. C.

20. The Technic of Aseptic Nephro-Ureterectomy and Its Indications (Lantern Demonstration).
EDWIN BEER, New York.
Discussion to be opened by WILLIAM F. BRAASCH, Rochester, Minn., and BRANSFORD LEWIS, St. Louis.

21. Vesical Calculi. JOHN L. CRENSHAW, Rochester, Minn.
Discussion to be opened by JAMES D. BARNEY, Boston.

22. A New Nonoperative Procedure for the Removal of Impacted Calculus in the Urethra (Lantern Demonstration). PHILLIPS A. JACOBS, Cleveland.
Discussion to be opened by EDWIN BEER, New York.

SECTION ON ORTHOPEDIC SURGERY

MEETS IN PAUL REVERE HALL

OFFICERS OF SECTION

Chairman—MELVIN S. HENDERSON, Rochester, Minn.
Vice Chairman—H. WINNETT ORR, Lincoln, Neb.
Secretary—HENRY BASCOM THOMAS, Chicago.
Executive Committee—EMIL S. GEIST, Minneapolis; GEORGE W. HAWLEY, New York; MELVIN S. HENDERSON, Rochester, Minn.
(Stenographer—MISS EDITH B. PHELPS, New York)

Wednesday, June 8—2 p. m.

1. Report of Two Cases of Kohler's Disease.
GEORGE I. BAUMAN, Cleveland.
Discussion to be opened by EDWARD S. HATCH, New Orleans; ARTHUR T. LEGG, Boston, and HENRY W. FRAUENTHAL, New York.

2. Stabilizing the Hip After Suppuration.
BENJAMIN P. FARRELL, New York.
Discussion to be opened by HENRY J. FITZSIMMONS, Boston, and WALTER G. STERN, Cleveland.

3. Osteomyelitis of the Pelvis.
EMIL S. GEIST, Minneapolis.

SYMPOSIUM ON FRACTURES OF THE HIP

4. Anatomic Treatment of Fractures Through the Trochanter and Neck of Femur.
CHARLES E. RUTH, Des Moines, Iowa.

5. Demonstration of the Abduction Method as Exponent of Radical Reform in Treatment of Fracture of Neck of Femur (Lantern Demonstration).
ROYAL WHITMAN, New York.

6. Results of Fracture of the Neck of the Femur Without Treatment. JOHN RIDLON, Chicago.
Discussion of papers 4, 5 and 6 to be opened by CHARLES E. THOMSON, Scranton, Pa.; OLIVER J. FAY, Des Moines, Iowa; ARTHUR A. LAW, Minneapolis; REGINALD H. SAYRE, New York; WILLIS CAMPBELL, Memphis, Tenn.; AURELIUS R. SHANDS, Washington, D. C.; LEROY C. ABBOTT, Ann Arbor, Mich., and EDWIN W. RYERSON, Chicago.

7 End Results of Whitman Operation for Ununited Fracture of the Neck of the Femur (Lantern Demonstration).
ARMITAGE WHITMAN, New York.

8. Bone Transplant in the Treatment of Ununited Fractures of the Neck of the Femur. CHARLES DAVISON, Chicago.
Discussion of papers 7 and 8 to be opened by ELLIOTT G. BRACKETT, and FREDERIC J. COTTON, Boston; EDWARD MARTIN, Philadelphia; MELVIN S. HENDERSON, Rochester, Minn., and HUBLEY R. OWEN, Philadelphia.

Thursday, June 9—2 p. m.

9. Operative Treatment of Scoliosis, with Report of Cases.
ROBERT E. HUMPHRIES, New York.
Discussion to be opened by RUSSELL A. HIBBS, New York; A. MACKENZIE FORBES, Montreal; ALBERT H. FREIBERG, Cincinnati, and EMIL G. GEIST, Minneapolis.

10. Iliosacral Joints. HORACE R. ALLEN, Indianapolis.
Discussion to be opened by JOEL E. GOLDTHWAITE, Boston, and WALLACE BLANCHARD, Chicago.

11. Lumbosacral Spine (Lantern Demonstration).
JAMES ARCHER O'REILLY, St. Louis.
Discussion to be opened by JEFFERSON D. GRIFFITH, Kansas City, Mo., and EDGAR D. OPPENHEIMER, New York.

12. Chairman's Address: Bone Transplantation; Its Use and Value. MELVIN S. HENDERSON, Rochester, Minn.

13. The Treatment of High Dorsal Scoliosis with Its Accompanying Serious Deformity.
JACQUE CALVÉ, Berck, Plage, France.
Discussion to be opened by SIR ROBERT JONES, Liverpool; NATHANIEL ALLISON, St. Louis; GEORGE B. PACKARD, Denver; JOSEPH BRENNEMANN, Chicago, and HENRY F. HELMHOLZ, Rochester, Minn.

14. Operative Treatment of Old Fractures and Dislocations of the Elbow. WILLIS C. CAMPBELL, Memphis, Tenn.
Discussion to be opened by H. WINNETT ORR, Lincoln, Neb., and JOHN L. PORTER, Chicago.

15. The Treatment of Tuberculosis of the Ankle.
FREDERICK J. GAENSLEN, Milwaukee.
Discussion to be opened by MICHAEL HOKE, Atlanta, Ga., and WALLACE COLE, St. Paul.

16. Whitman's Loop Operation (Lantern Demonstration).
SAMUEL KLEINBERG, New York.
Discussion to be opened by ARTHUR D. KURTZ, Philadelphia; ARMITAGE WHITMAN, WILLIAM L. SNEED, CHARLTON WALLACE and LEO MEYER, New York, and STERLING BUNNELL, San Francisco.

Friday, June 10—2 p. m.

Election of Officers

17. Value of Bone Pin Arthrodesis in the Treatment of Flat Foot (Lantern Demonstration).
ROBERT E. SOULE, Newark, N. J.
Discussion to be opened by JAMES W. SEVER, Boston; H. WINNETT ORR, Lincoln, Neb.; SAMUEL E. ROBERTSON and EDWARD J. ILL, Newark, N. J., and ROBERT B. COFFIELD, Cincinnati.

18. Fractures of the Spine of the Tibia.
JOSEPH J. KURLANDER, Cleveland.
Discussion to be opened by ROLAND HAMMOND, Providence, R. I.; FREDERICK C. KIDNER, Detroit; S. FOSDICK JONES, Denver, and CHARLES H. PHIPER, Chicago.

19. Sclerosing, Nonsuppurative Osteomyelitis as Described by Garrè, with Roentgenographic and Pathologic Findings. S. FOSDICK JONES, Denver.
Discussion to be opened by EDWIN W. RYERSON, Chicago; CLARENCE B. FRANCISCO, Kansas City, Mo.; ROBERT D. SCHROCK, Omaha, and MURRAY S. DANFORTH, Providence, R. I.

20. Muscle Educational Treatment and Results of Orthopedic Work on the Upper Extremity.
ARTHUR STEINDLER, Iowa City.
Discussion to be opened by ROBERT W. LOVETT, MARK H. ROGERS and FRANK R. OBER, Boston.

21. Operative Lengthening of the Femur.
VITTORIO PUTTI, Bologna, Italy.
Discussion to be opened by SIR ROBERT JONES, Liverpool; WILLIAM L. KELLER, U. S. Army, and ROLAND HAMMOND, Providence, R. I.

22. Fractures of the Vertebrae, and Their Treatment.
CHARLES E. THOMSON, Scranton, Pa.
Discussion to be opened by CHARLES F. PAINTER, Boston; EDGAR STURGE, Scranton, Pa.; GEORGE W. HAWLEY, Bridgeport, Conn.; ZABDIEL B. ADAMS, Boston, and MARCUS H. HOBART, Evanston, Ill.

23. Some Principles of Arthroplastic Operations.
WALTER I. BALDWIN, San Francisco.
Discussion to be opened by VITTORIO PUTTI, Bologna, Italy; MURRAY S. DANFORTH, Providence, R. I.; ARTHUR STEINDLER, Iowa City, and CHARLES F. EIKENBARY, Spokane, Wash.

24. A New Method of Diagnosing the Functioning Foot.
ROLAND O. MEISENBACH, Buffalo.
Discussion to be opened by EDWARD A. RICH, Tacoma, Wash., and ANSEL G. COOK, Hartford, Conn.

SECTION ON GASTRO-ENTEROLOGY AND PROCTOLOGY

MEETS IN HARVARD MEDICAL SCHOOL

OFFICERS OF SECTION

Chairman—LOUIS J. HIRSCHMAN, Detroit.
Vice Chairman—H. W. SOPER, St. Louis.
Secretary—FRANKLIN W. WHITE, Boston.
Executive Committee—WILLIAM M. BEACH, Pittsburgh; FRANK SMITHIES, Chicago; LOUIS J. HIRSCHMAN, Detroit.
(Stenographer—MISS MARGARET I. MALONEY, Chicago)

Wednesday, June 8—2 p. m.

1. Chairman's Address: The Teaching of Gastro-Enterology and Proctology. LOUIS J. HIRSCHMAN, Detroit.
2. A Study of the Gastric Digestion of Foods in the Normal Individual (Lantern Demonstration)
MARTIN E. REHFUSS and PHILIP B. HAWK, Philadelphia.
3. Enzymatic Activity of Duodenal Contents in Normal Men.
CHARLES W. MCCLURE and A. S. WETMORE, Boston
4. Some Observations on the Fractional Analysis of the Duodenal Contents in Normal Individuals.
JULIUS FRIEDENWALD and JOSEPH SINDLER, Baltimore.
5. Experience with the Fractional Examination of the Duodenal Contents in Peptic Ulcer.
MAX EINHORN, New York.
6. The Interpretation of Digestive Symptomatology.
ERNEST GAITHER, Baltimore.
7. Subjective Gastric Indigestion.
JOHN M. BLACKFORD, Seattle.
8. The Dietetic Treatment of Headache.
THOMAS R. BROWN, Baltimore.

Thursday, June 9—2 p. m.

9. Association of Gastric and Duodenal Ulcer with the Tabetic Crises of Syphilis.
BURRILL B. CROHN, New York.
10. The Malignancy or Nonmalignancy of Gastric Ulcer.
LEWIS GREGORY COLE, New York.
11. The Causes of Unfavorable Symptoms After Gastro-Enterostomy and Their Treatment.
LOGAN CLENDENING, Kansas City, Mo.
12. Diagnostic and Therapeutic Aspects of Late Sequelae of Gastric Surgery.
GEORGE B. EUSTERMAN, Rochester, Minn.
13. The Phenoltetrachlorphthalein Test of Liver Functions.
ABRAHAM H. AARON, Buffalo.
14. The Meaning of Jaundice. CHARLES G. STOCKTON, Buffalo.
15. Nonsurgical Drainage of the Biliary Tract: Its Usefulness Diagnostically and Therapeutically.
FRANK SMITHIES, CLYDE F. KARSHNER and RICHARD BARTLETT OLESON, Chicago.
16. Biliary Tract Disease—Some Lessons Learned from Duodenobiliary Drainage—Future Problems.
B. B. VINCENT LYON and HENRY J. BARTLE, Philadelphia.

Friday, June 10—2 p. m.

Election of Officers

17. Diaphragmatic Hernia of the Stomach.
PHILEMON E. TRUESDALE, Fall River, Mass.
18. The Normal Incidence of Visceroptosis, as Determined by 1,966 Observations on 290 Postmortem Sections of All Ages and Both Sexes. JOHN BRYANT, Boston.
19. A Case of Giardia Intestinalis Infestation Successfully Treated by Transduodenal Lavage.
SIDNEY K. SIMON, New Orleans.
20. Chronic Ulcerative Colitis.
FRANK C. YEOMANS, New York.
21. A Method of Shortening the Elongated Cecum by Unabsorbable Stitches in the Taeni Coli—Also in the Inner Peritoneal Reflection; Report of 200 Cases Covering a Period of Six Years. ANGUS MCLEAN, Detroit.
22. Rectocolonic Diverticula, Diverticulitis, and Peridiverticulitis. SAMUEL G. GANT, New York.
23. The Two Stage Operation for Ischiorectal Abscess and Fistula. WALTER A. FANSLER, Minneapolis, Minn.
24. The Surgical Therapy of Cancer of the Rectum.
JEROME M. LYNCH, New York.

SECTION ON MISCELLANEOUS TOPICS

MEETS IN RECEPTION HALL, MECHANICS BUILDING

OFFICERS OF MEETING ON ANESTHESIA

Chairman—JAMES T. GWATHMEY, New York.
Vice Chairman—ELMER I. MCKESSON, Toledo, Ohio.
Secretary—F. HOEFFER MCMECHAN, Avon Lake, Ohio.

Wednesday, June 8—2 p. m.

1. Chairman's Address: Current Progress in the Science and the Practice of Anesthesia.
JAMES T. GWATHMEY, New York.
Discussion to be opened by ELEANOR SEYMOUR, Los Angeles, and JOSEPH E. LUMBARD, New York.
2. The Acapnia Theory, Now.
RAYMOND C. COBURN, New York.
Discussion to be opened by YANDELL HENDERSON, New Haven, Conn.; JOHN J. BUETTNER, Syracuse, N. Y., and FREEMAN ALLEN, Boston.
3. A Classification of Anesthetic Signs and Effects Upon Cardiovascular System of Ethyl Chlorid in Anesthetic Dosage in Man.
ARTHUR E. GUEDEL, Minneapolis, Minn.
Discussion to be opened by F. HOEFFER MCMECHAN, Avon Lake, Ohio, and S. GRIFFITH DAVIS, Baltimore.
4. Some Anesthetic Aids in Surgery.
ELMER I. MCKESSON, Toledo, Ohio.
Discussion to be opened by ISABELLA C. HERR, Chicago, and F. L. RICHARDSON, Boston.
5. Anesthesia for Nose, Throat and Abdominal Surgery by the Nitrous Oxid-Oxygen Chloroform Ether Combination. H. E. G. BOYLE, London, England.
Discussion to be opened by HARRY HARRISON, Norfolk, Va., and CHARLES H. SANFORD, New York.
6. Anesthetic Units of Measurement.
ALBERT H. MILLER, Providence, R. I.
Discussion to be opened by LINCOLN F. SISE and BORIS RAPOPORT, Boston.

That humanity would make a "beaten path" to the door of the man who creates a "better mouse-trap" is a fine sentiment. However, in our modern economic scheme, the idea does not work out. The "beaten path" for the "better mouse-trap" usually leads to the door of the corner grocer, and "mouse-trap" making may involve the development of new manufacturing processes; the solving of problems of business organization and financing, and the maintaining of an elaborate system of distribution; in short, manufacturing today is a complicated matter and often it is a far cry from the idea or invention to the finished product in the hands of the user.

When one considers that hundreds of skilled and versatile men are devoting their entire efforts to the manufacture of articles used in the practice of medicine, the value of the Commercial Exhibits at the approaching Convention becomes apparent. These exhibits will bring together in one orderly, unified exposition, the best things that these men have been able to produce. They will afford an opportunity to see not only the articles themselves, but to talk with factory representatives, research workers and skilled technicians.

All visitors are cordially invited to spend as much time as possible in the Exhibit Hall. A profitable plan is to visit a part of the exhibits each day rather than to attempt to "do" all the exhibits in one day. As in the past, Exhibit Hall will be a favorite place to meet friends or to fill in time between meetings of the various sections. No one need to feel obligated by stopping at a booth and asking questions or seeking information. No one will be unduly urged to buy.

Exhibit Hall will be open from 8:00 a. m. to 6:00 p. m. daily. Following are brief descriptions of some of the exhibits. The list is not complete, but will afford a good idea of the interesting displays in store for those who visit the various booths.

The A. S. Aloe Company exhibit in Space 141-142. This exhibit will include a large number of desirable specialties, among which will be the well-known Lightning Electro-Therapeutic Cabinet. This company will also have a fine display of new, high grade imported instruments, selected from shipments just received direct from their European buyer during the past few weeks.

The Frank S. Betz Company will show a full line of steel furniture with several new items, tables and cabinets. The exhibit will also include a most complete line of surgical instruments, showing many special instruments which have been imported from Europe, together with surgical merchandise and medical supplies as required by the physician in every-day practice. Booths 69-70.

The Foregger Company will offer a few new additions to their line of anesthesia appliances such as the "Coburn Cup" for pharyngeal inhalation anesthesia, the "Cotton Analgesia Bottle," the "Cotton Mask" (used with Cotton Process Ether), and various attachments to the "Gwathmey Apparatus" for "Synergistic Anesthesia." The Booth number is 97.

Greco & Sonne, Inc. will exhibit four models of the Standard Sphygmomanometer. The prominent features of the Standard Sphygmomanometer are: accuracy, a metal scale, triple-distilled mercury, and a wide bore manometer tube. Each Standard Spygmomanometer is tested against their Master Instrument which has been tested by the United States Government Bureau of Standards. Booth number 5.

Hanovia Chemical & Manufacturing Co. will exhibit both of their therapeutic appliances, the Alpine Sun Lamp and the Kromayer Lamp. These are now developed to that point which prompts the maker to call them both, instruments of physical and mechanical precision. The latest model Alpine Sun Lamp has remarkably clean cut lines; there are no thumb-screws or any adjustable pins that make for intricacy. The exhibit will be in Booth No. 28.

The Klett Manufacturing Co. will exhibit a full line of Colorimeters for every purpose, research, clinical and for the practicing physician, also the Danzer-Hooker Micro-Capillary Tonometer, Shahan's Electro-Thermophore and "Electric Babies." This company has embodied some novel ideas in colorimeter construction. The Space number is 172 (Balcony).

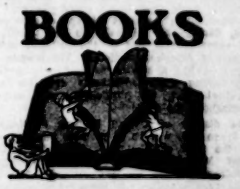
The Kny-Scheerer Corporation of America will show in Spaces 94-95 late developments in Surgical Operating Tables, the Hawley Table for Orthopedic and Fracture work, also the late improvements in Sterilizing Apparatus and means for closely checking up the technique of the Sterilizing process. A feature of special interest will be their Surgical Operating Room light fixtures with both gas and electric attachments.

The Exhibition of E. Leitz, Inc., N. Y. C., will be located in Booth No. 64. Entirely new lines of the well known Leitz Microscopes and Microtomes, as well as a new Blood Counting Apparatus, will be exhibited. As a special feature may be mentioned the demonstration of the "Edinger" Drawing and Projection Apparatus, a universal instrument which permits drawing, reconstruction work, micro and lantern slide projection, micro photography, etc.

The Lungmotor Company will show by means of artificial lungs and sheep lungs, the exact action of the Lungmotor when used on subjects from new-born baby to largest adult, in cases of collapse, asphyxiation, drowning, electric shock, etc. The exhibit will be in Space 71.

The C. H. Sorensen Company, at their booths, Nos. 36 and 37, will display their latest achievement, The Sorensen Universal Specialist Chair. This chair combines a number of new and up-to-date features. As usual, they will also demonstrate the different models of Tankless Air Compressors, including the Yankauer Outfit for Tonsillectomy, The Coffin Apparatus and Sorensen Sinus Cleanser.

Wilmot Castle Company will exhibit office sterilizers suitable for industrial and small hospitals in Space No. 112. Interest this year will be centered in the improved pattern Castle-Rochester Electric Instrument Sterilizer. Two important changes have been made in the original design. A new sterilizing outfit combining this Instrument Sterilizer with the Water Sterilizer will be shown.



The American Institute of Medicine will have on exhibit in Space 34 some interesting material showing the methods used by their Library and Special Service Departments for keeping physicians in touch with the latest developments in the medical field. A large number of the staff members of the Institute will be on hand to personally explain the service rendered and to make the acquaintance of the profession.

D. Appleton & Co. will feature in Booth 29 the new set of gynecological and obstetrical monographs, just published; a new work entitled The Principles and Practice of Surgery by Dr. H. A. Haubold; a new completely revised edition of Osler's Practice of Medicine and several other recent volumes. The Appleton line of standard medical and surgical works including the works of Holt, Barker, Billings, Kaye, Williams, Foman, Rosenau and others will also be on display.

At the Blakiston booth, Space 140, there will be exhibited several new and interesting works: Bowlby and Andrewes, Surgical Pathology; Deaver and Ashhurst, Surgery of the Upper Abdomen; a new edition of Berkeley and Bonney, Difficulties and Emergencies of Obstetric Practice; Barr and Maloney, Types of Mental Defectives; a new edition of Binnie's Operative Surgery; a new edition of Webster's Diagnostic Methods, and many other valuable publications of the past few months.

Among new books shown by F. A. Davis Company, may be mentioned Sajous' work on the "Internal Secretions" in two volumes. Dr. S. Calvin Smith's "Heart Affections: Their Recognition and Treatment." Dr. B. B. Grover's "Handbook of Electrotherapy for Practitioners and Students." The English translation from the French of the "Rational Treatment of Tu-

berculosis," by Dr. Charles Sabourin. McGrath's "Operative Surgery," Faught's "Essentials of Laboratory Diagnosis" and a treatise on the "Diseases of the Digestive System," in 2 volumes, by Dr. Anthony Bassler. Booth 90.

Paul B. Hoeber, New York, Space 13, will show the new monographs: Tilney & Riley, "Form and Functions of the Central Nervous System," Baetjer & Waters, "Injuries and Diseases of the Bones and Joints," Law, "Mastoids," Macleod, "Diseases of the Skin," Lewis, "Mechanism of the Heart Beat," Tilley, "Nose and Throat," and the journals, Annals of Medical History, The American Journal of Roentgenology and Neurological Bulletin. There will also be an interesting display of old and rare medical books.

The International Journal of Gastro-Enterology will be displayed and described in Booth 158 (Bal.). This is a new journal and is devoted to all problems related to the digestive system and the various organs influencing it. Copies of the first issue will be on display. Almost all practicing physicians will find something here that will interest them.

Lea & Febiger, Space 12, will have on exhibit numerous new books published in 1921: Aaron's Diseases of Digestive Organs, Ochsner's Surgical Diagnosis & Treatment, Vols. I & II ready, Vols. III & IV, shortly; Kanavel's Infections of Hand (4th edition); Ormsby on Skin (2nd edition); Carter's Clinical Dietetics (2nd edition); Dayton's Practice (4th edition); Holmes & Ruggles' Roentgen Interpretation (2nd edition); MacKee's Roentgen Therapy; Danysz & Rackemann's Evolution of Diseases; Morrey's Bacteriology (2nd edition); Park's Hygiene & Public Health.

The Massachusetts General Hospital exhibit, Booth 17, of the Case Records series will stand fundamentally for two main ideas, (1) constant contact with the life of a progressive hospital made possible for every physician and surgeon, and (2) a great principle of case teaching, daring and original, the result of years of experience of one of the brilliant pioneer minds of American medicine. The hospital believes it has a service to render to medicine in making these advantages available at a nominal cost to physicians and surgeons throughout the country.

The display of Oxford Medical Publications, Space 140, will be of peculiar interest owing to the near completion of the Oxford Loose-Leaf Medicine and the Loose-Leaf Supplementary Service for the Oxford Loose-Leaf Surgery. In addition to these recognized monumental works there will also be ready for delivery Sir Robert Jones' Orthopedic Surgery; Henry Head's Studies in Neurology; Major Gillies' Plastic Surgery of the Face; new editions of the famous Oxford Medical Classics, and the Oxford Periodicals, Medical Science, Abstracts and Reviews and The Quarterly Journal of Medicine.

The special feature of the exhibit of the W. F. Prior Company, Inc., Hagerstown, Md. (occupying Booth 31), will be the demonstration of the time-saving blue-print plan by which their ten-volume, loose-leaf Tice's Practice of Medicine was written, a plan which makes their publication different from any previous effort. In addition they will exhibit their medical services, corollary to Tice; viz., the International Medical Digest, and the Research Service.

The most attractive feature of the Rebman Company exhibit, Space 124, will be some paintings of flowers as perfect as nature lets them grow in the garden or the field. They are of wonderful, artistic workmanship and will prove a pleasure to the eye. The artist is a lover of flowers. His taste in arrangement, the perfection of his coloring, and realistic representation leave a most vivid and pleasing remembrance upon the mind of the onlooker.

The C. V. Mosby Company, publishers of medical, dental and nursing books, will have a full and complete exhibit of all their publications at Exhibit Space 14. They will feature such new books as Horsley's General Surgery, Opie's Respiratory Disease, Rose's Physical Diagnosis, Sheffield's Diseases of Children, and their complete line of standard publications. The Booth number is 14.

W. B. Saunders Company will have an exhibit in Space 15. Among books shown will be Volumes 7 and 8 of Keen's Surgery. Other new books will be The Mayo Clinic Volume, just from the press; Sir Berkeley Moynihan's Essays on Surgical Subjects; Bandler's The Endocrines; Boyd's Preventive Medicine; two postgraduate bi-monthlies, The Surgical Clinics of North America and the Medical Clinics of North America; Ranson's Anatomy of the Nervous System; a small Primer for Diabetic Patients from The Mayo Clinic, by Wilder, Foley and Ellithorpe. Among the standard works will be Warbasse's 3 volume Surgical Treatment; Cabot's 2 volume Differential Diagnosis; Graves' Gynecology.

Wm. Wood & Co. emphasize the point that members may feel free to enter their booth, examine their various works and leave without obligating themselves. Their books will be there for the pleasure and profit of visitors; the representatives for their convenience. Some 50 new books and new editions have been produced since the last annual meeting. The exhibit will be in Booth 30.

All publications of the A. M. A. Press, including the various special Journals, the Quarterly Cumulative Index to Current Medical Literature, the new American Directory, as well as new editions of some popular and handy books, will be shown in the Balcony at head of stairs. Official buttons and automobile emblems will be available.

DIAGNOSTIC EQUIPMENT

The American Surgical Specialty Company, Booth 11. Special attention will be directed to their lamps for locating dental foci of infection as well as their new lamp for abdominal surgery. Cameron's Spudlite will prove of interest to those interested in the location and removal of foreign bodies from the eye. It furnishes illumination, magnification and instrumentation under control of one hand and leaves the other hand free for control of the patient.

W. A. Baum Company will exhibit the "Baumanometer," a device for the determination of blood pressure. A corps of demonstrators will be in attendance. Practical demonstration of the mechanical aspects of blood pressure technique in relation to the end result will be a feature of this exhibit. Space 35.

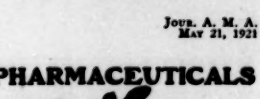
Charles F. Hindle will have in Space 2 an exhibit of pertinent interest to all internists as well as general practitioners. This will be a showing of the electrocardiograph and its use in photographically recording the activities of the heart.

Sanborn Company, Spaces 32 and 33, will exhibit and demonstrate three instruments for the determination of the basal metabolic rate: the technically simple Sanborn Handy, the widely used Sanborn Benedict, and a modern Tissot apparatus. The heart specialist should be particularly interested in the new Sanborn Pulse Wave Recorder. The Sanborn Vital Capacity Spirometer will attract those physicians who treat either heart disease or pulmonary tuberculosis. The Sanborn Blood Pressure Outfit will also be shown.

Taylor Instrument Companies will exhibit in Spaces 53-56. Here will be shown the well-known Tycos Sphygmomanometers—Pocket and Office Sizes—as well as a useful line of high-grade Urinary Glassware and special Bath Thermometers. Tycos Blood Pressure Manuals and special Bulletins—"Humidity and the Physician," "Physiological and Therapeutic Action of Baths"—will be distributed.

C. H. Sorensen Company, Inc., will show, at Booth No. 38, a line of instruments, apparatus, glassware, standard solutions, reagents, chemicals and stains pertaining to blood chemistry. Of particular interest will be the complete outfit for the Basal Metabolism Estimations as designed by Dr. Cameron V. Bailey of the Department of Metabolism, New York Post Graduate Medical School and Hospital, consisting of a new model gasometer and special burettes for gas and water analysis.

PHARMACEUTICALS



The Abbott Laboratories in Space 21 will exhibit the results of recent chemical research on an important series of new local anaesthetics. Numerous Council-passed medicinal chemicals and surgical aids such as Acriflavine, Barbital, Benzyl-Benzoate, Chlorazene, and Parresine will also be shown. All conventionlists are cordially invited to register for clinical samples of the Abbott preparations.

Armour and Company, Chicago, Space 29, will show a line of the Endocrine Gland and other Organotherapeutic preparations. Such things as Pituitary Liquid, Thyroids, Corpus Luteum, etc., will be featured. Sterile Surgical Catgut Ligatures, plain, chromic and iodized will also be shown.

P. Astier Laboratories of Paris, France, Space 68, will again exhibit their Arheol Pearls, an improved oil of Santol preparation, as well as Riodine, an organic iodine compound. Mr. Albert Thouin with assistants will receive visitors and supply samples and literature.

B. B. Culture Laboratories, Space 41, will interest visitors in their Bacillus Bulgaricus, one of the less obstrusive members of the biological family. They will point out the field of usefulness of a culture of Bacillus Bulgaricus, giving its latest uses. A microscopic demonstration of the organism will also be shown.

Bethlehem Laboratories, Inc., Space 122, will feature the value of "Hycloride" as a professional and personal antiseptic, germicide, and deodorant. One feature of the exhibit will be a huge tank of sodium hypochlorite in connection with spectacular electrical effects. Another will be the first showing of a novel drop-measuring device.

The Calco Chemical Co., at Space 81, will exhibit a full line of "Calco" products, featuring Cinchophen Calco, Tolysin, Salicaine, Acetannin Calco, Amidopyrine Calco. These are but a few of the entire line. They will also offer a pure white crystalline Benzidine for occult blood testing and other chemicals for diagnostic testing.

The Dermatological Research Laboratories, Philadelphia, will exhibit at Booth No. 40, Arsphenamine (606) and Neoarsphenamine (914) with intermediates, charts, formulae and reprints of experimental and clinical reports. The intensive studies and research work of the Laboratories will be outlined as a result of which an Arsphenamine and a Neoarsphenamine of superior efficiency have been elaborated.

The Maltbie Chemical Company, Space 19, Mr. B. L. Maltbie will be in charge of his "Calcreose" exhibit. Calcreose powder, Calcreose tablets and Calcreose solution will be shown, and every visiting doctor will be given something to take away with him from this exhibit that will make him remember "Calcreose" when indications for creosote therapy exist.

The Diarsenol Company, Space 67, will show a complete line of arsenicals, including Diarsenol (Arsphenamine), Neodiarsenol (Neoarsphenamine) Sodium Diarsenol, (Sodium Arsphenamine) and Silver Diarsenol, (Silver Arsphenamine). Those in charge of the exhibit will be glad to demonstrate any or all of these products to those interested. Literature and clinical reports will also be available.

Hynson, Westcott & Dunning, Spaces 22 and 27, will feature their demonstrations of the use and advantages of apparatus and reagents originated and perfected by prominent physicians for securing better diagnostic results. The colorimetric determination of the true acidity of gastric contents by the Sahli-King method—see the Johns Hopkins Hospital Bulletin, Volume XXXI, No. 351, pp. 153 to 162—will be the latest thing to claim visitors' attention. Benzyl Benzoate preparations and other interesting pharmaceuticals will also be shown.

The Jaeger-Bigelow Co., Balcony Space 105, will exhibit a new line of standardized ligature material, specializing strongly on im-

ported catgut from the Jaeger Raw Gut Factories, Markneukirchen, Saxony.

The Lowy Laboratory, Inc., will present new features in connection with their Solution Arsphenamine-Lowy, intended to simplify the physician's work and give him a safe means of obtaining full therapeutic value in his use of arsphenamine. Booth 85.

H. A. Metz Laboratories, Space 18, will have a replica of a well-ordered clinic for the treatment of syphilis, containing apparatus necessary for treatment. The features will be brought out so definitely that observers who carry out the thought of the laboratories will possess themselves of a most highly developed clinic, so far as the apparatus is concerned. In addition, there will be demonstrations of the method of preparing solutions from Salvarsan, Neosalvarsan and Silver Salvarsan. The booth will also show the other products handled by the laboratories, including Novocain in its various forms, Pyramidon, Orthoform, Parathesin, Albargin, etc.

Upsher Smith of St. Paul, grower of Digitalis, will be glad to explain the methods of culture and purification which he has worked out in his Digitalis fields, exhibiting interesting species of the plant in full flower, including D. lutea. The advantages of the Hatcher cat method of standardization are too well known to need emphasis, and Mr. Smith will be ready to discuss with visitors this and other phases of the subject. Space 132.

The Wilson Laboratories will have at Booth 63 a striking, instructive exhibit of the various animal glands and the methods of preparing the desiccated products and extracts. A knowledge of source and preparation of glandular products will materially assist the physician in getting results through endocrine medication. Visit this booth and get acquainted with the methods of preparation of the various desiccations.

Ambulatory Pneumatic Splint Mfg. Co., Space 110, will demonstrate their well-known Ambulatory Pneumatic Splint, for application of extension, counter extension, and immobilization in fractures of the hip, thigh and leg. They will show this as a reducing apparatus, as a bed splint, and as a walking splint. This company will also exhibit their Ambumatic Washable Abdominal Supporters with Adjustable Binders.

The exhibit of Berger Brothers & Co. will show the various styles of Spencer Corsets and corrective garments on forms. A corps of courteous, competent corset fitters will be in attendance. The extensive study which this firm has made in the field of corsetry enables their representatives to give authentic information regarding corrective garments. Space 7.

The Battle Creek Deformity Appliance Company will exhibit in Space 4 their patented supporter for Sacro-Iliac Sub-Luxation and abdominal support. This supporter is known as the "El-Ar" and is made in various styles, so as to meet every requirement when a supporter is needed. Visitors are cordially invited to stop and see this support.

The exhibit of the Carnes Artificial Limb Company, in Space 121, will consist of man wearing Carnes Arms, giving a personal demonstration of what can be accomplished with the arm, and showing its general usefulness; also showing its natural appearance, the ease with which it is manipulated and a general explanation of its mechanism and quality.

Wm. H. Horn & Brother expect to show samples of Trusses, Abdominal Supporters and other Surgical Appliances. Particular attention will be given to demonstrating the "Curtis" Support and "Hornbro" Seamless Elastic Hosiery. Space 120.

The Miracle Artificial Arm Company extends a cordial invitation to physicians and surgeons to witness a practical and interesting demonstration of their latest, up-to-date mechanical hand and arm on exhibition at Booth No. 110. They will present a complete historical record of artificial hands from the first one mentioned in history up to date. A rather interesting study.

W. L. Cummings Chemical Co., Space 5, will exhibit their modern and approved tubular and needle radium applicators, including forceps and other instruments for the handling of radium applicators. The feature of the exhibit will be radium needles manufactured from non-corrosive alloy steel. These needles will have several very important features not contained in any needles previously manufactured and will be of considerable interest to the radium therapist.

The Radio Chemical Corporation, Space 6, will again exhibit a quantity of pure Radium salts and will demonstrate the penetrating power of the Gamma rays for the benefit of those who have never seen the precious metal. In addition, they will exhibit some new platinum needles and screens designed to concentrate a maximum of Radium in a minimum of space, at the same time affording complete protection from Beta radiation. Areas hitherto inaccessible to comparatively large amounts of Radium are rendered readily accessible by the use of these special needles and screens.

The Radium Chemical Company, of Pittsburgh, Space 104, will show new instruments, and the Technical Staff will demonstrate their use as a means of affording protection to the hands and person of the operator. If for no other reason, the exhibit will be of particular interest to radium workers.

The exhibit of the Radium Company of Colorado, Inc., Denver, Colo., will demonstrate that this organization is particularly well fitted to aid the physician in this respect. The instrument department of this company manufactures a large variety of "Standard Applicators and Accessories," and its experimental facilities are at the disposal of its clients. This firm has added a new feature to its information service by publishing and distributing, monthly, radium abstracts in card index form. Spaces 23-24-25.

Bausch & Lomb Optical Company will show a new visual acuity test apparatus of great precision, equipped with Ives Screens for continuously increasing and decreasing the size of detail of the test object; an ophthalmic test lens set, especially corrected to represent precise refraction. A new Stereo Campimeter; a new slit lamp for examination of the cornea and interior of the human eye; the latest models of microscopes, centrifuges, haemacytometers, colorimeters and micro lamps will also be exhibited. Spaces 72-73.

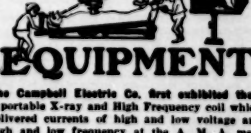
The General Optical Company exhibit in Space 101 will reflect in many ways the latest developments of scientific equipment for the refracting room. They will show many improved and original features in their ophthalmoscopes and retinoscopes, trial frames and universal ophthalmometer. The improved Hare-Marple Ophthalmoscope will be featured.

DeZeng-Standard Company will display in their Booth, number 92, a new type of ophthalmoscope for use by the general practitioner and the ophthalmologist. It has a new and superior type of illumination, whereby the interior of the eye is more readily and satisfactorily viewed. There will be on display also a new DeZeng retinoscope with an entirely new type of illumination. Every ophthalmologist will be interested in the entirely new DeZeng refracting and muscle testing instrument, which will be shown by able demonstration.

The Julius King Optical Company will exhibit in Space 80 a most complete line of ophthalmological apparatus, Eye, Ear, Nose and Throat instruments, Ophthalmometers, Perimeters, Test Cabinets, Specialists' Cabinets and Chairs, and some of the newest models of surgical instruments. Particular attention will be directed to Dr. Clyde E. McDannald's instrument for the removal of cataractous lenses by suction (phakoerisis).

The exhibit of the Spencer Lens Company will consist of a number of the latest types of Microscopes, especially high power Binocular microscopes, built on an entirely new plan, also a complete line of Microtomes. In this group will be an entirely new type of microtome, first shown at this meeting. Optical measuring instruments, refractometers, polariscopes, spectrometers as well as haemmeters and samples of Optical glass, made in America, will be featured. Space 175 (Balcony).

The Woolf Instrument Corporation, manufacturers of ophthalmic appliances, will exhibit a model refracting room—The Stiopometer (an automatic trial case), a new chair for refractionists, and the Reeves Illuminated Test Letter Cabinet, the latter shown for the first time. This company has just published a text book: "Refraction and Muscular Imbalance Simplified," which may be examined at the booth. Space 118.



The Campbell Electric Co. first exhibited their portable X-ray and High Frequency coil which delivered currents of high and low voltage and high and low frequency at the A. M. A. meet in Boston, in 1906. Fifteen years have passed and the Campbell Electric Company again exhibits its product, showing the progress they have made in fifteen years in the development of X-ray and Electro Medical Apparatus and its accepted worth to the medical profession. Spaces 96 and 111.

The Eastman Kodak Co., this year, Spaces 125 and 126, will show representative results that may be obtained with their Dupli-Tized X-ray films and present day apparatus. The negatives exhibited will be representative of the work that interests the average physician. In addition to this they will show some of the other applications of photography in the medical field, for example, its use in obtaining clinical records and pictures of pathological specimens.

The Engeln Electric Company, Booth No. 57, will be adjacent to and in connection with the exhibit of Kelley-Koett Manufacturing Company, Spaces 53 and 54. There may be found the new Engeln Mobile Unit and the Bucky-Potter Diaphragm. The Mobile Unit has created much favorable comment and the Bucky-Potter Diaphragm is one of the later developments.

H. G. Fischer & Co., Inc., will hold forth in Spaces 86 and 87; their exhibit will consist mainly of their 2-B Interrupterless Transformer, being amply powerful for practically all radiographic work. Also their Military Model High Frequency, d'Arsonval and Diathermy Equipment, the type of apparatus much in evidence in Government Reconstruction Hospitals.

Holzknecht Battery & Optical Co., Space 119, will bring out the many uses which physicians are making of the "Hogan" High Frequency

Apparatus. Don't miss their demonstration of this and other McIntosh specialties.

At the James Picker exhibit, Balcony Space 164, everything for the Roentgenologist from making the exposure to filing or mailing the finished result will be shown. Some interesting features will be The Potter Bucky Diaphragm, The Fluoroscopic Grid, The New Style Film Hanger, a Portable Apparatus. A good opportunity to get acquainted with a house whose foundation consists of Service.

Thompson Plaster Co. will demonstrate their new oil immersed, Style F, outfit that was built to meet the demand for a machine that could be operated continuously for treatment work. Specially built for Diathermy and Auto Condensation work, although it has a large number of other uses. They will also demonstrate a new X-ray transformer for hospitals and physicians who desire to do all grades of radiography and fluoroscopy. Spaces 86-87.

The Victor X-ray Corporation, Spaces 105, 106 and 107, has planned to introduce at the meeting a number of new devices which will be of special interest to every physician using the X-ray. Special interest will be centered in the Victor Coolidge Stabilizer which will mean a much higher efficiency for every Coolidge control system. The new Victor Vertical Roentgenoscope which will also be shown represents much time and thought on the part of the manufacturers in bringing apparatus of this type up to the point of utmost practicability. A visit to the Victor exhibit will prove interesting, instructive and helpful.

Waite & Bartlett Mfg. Co., Space 89, will feature their new "Solace" Vertical Fluoroscope and Fluoroscopic and Radiographic Table, which combination is fed from a single U. S. Army Bedside Transformer. The apparatus is especially designed for radiograph, and fluoroscopy. Their three way high tension switch makes this cost and space saving arrangement practical. The instrument affords the maximum of convenience, as the high tension current may be diverted instantly from one to another of the three tubes.

The Wappler Electric Co., Spaces 65, 75 and 76, will demonstrate their latest model National X-ray machine, designed for the general practitioner, and also their combination Portable and hospital ward type X-ray apparatus. This company is making a special display of X-ray plates possessing novel and striking features. The Wappler High Frequency apparatus will be shown and especially the Portable Telatherm as designed for the U. S. Army and which is used for bladder fulguration work. This company will also exhibit their well-known line of cystoscopes and ophthalmoscopes and other electrically lighted diagnostic instruments as well as Cautery apparatus.

INSTRUMENTS

The Bard Parker Company will have an attractive exhibit in Space 69 of their well-known Detachable Blade Surgical Knives. Surgeons interested in having an ever ready, sharp scalpel should see this demonstration. C. R. Bard will also display a useful line of urological articles.

The exhibit of Becton, Dickinson & Co., Space 62, will include several very interesting additions to their line of LUER Syringes and ASEPTO Syringes. It will also include the B-D Co. Thermometer with some modifications of the case. As usual, complete lines of YALE Needles and ACE Bandages will also be shown.

The DeVilbiss Company, Booth 79, will exhibit Atomizers, Nebulizers, Powder Blowers, Steam Vaporizers for every nose and throat requirement in both Physicians' and Patients' style. As this company's line of manufacture is confined strictly to these products, it is in a position to render real service to physicians interested in Atomizers.

August E. Fraas Company, Inc., will present in Booth No. 157 (Bal.) their line of surgical instruments for Eye, Ear, Nose and Throat. New ideas in construction will be featured.

T. J. Holmes Company, Space 155 (Bal.), will demonstrate their newly-developed NONSPIL Atomizer. The fact that this atomizer obviates leakage of liquid and also regulates weight of its spray should be of particular interest to visitors. All are invited to stop and examine carefully this new atomizer.

MacGregor Instrument Company will exhibit in addition to their regular line of Clinical Thermometers, Hypodermic Syringes, Needles, Operating Instruments, etc., a new and unique line of green glass Syringes made from a special emerald glass; a Syringe of particular interest to tonsil specialists; Clinical Thermometers showing an indelible pigment to resist ordinary sterilizing agents; also, a new outfit for Schick Diphtheria test. Space 50.

The Mahady Company's exhibit of sterile suture material will be found in Space 82. The laboratory in which this is prepared is located in the vicinity of the exhibition hall and visitors will be cordially welcomed. They will also feature many special instruments devised by local specialists, and will have a large display of the well-known Stille Swedish hand-forged instruments, and the Smith Bone Clamps.

E. B. Meyrowitz, Inc., New York, London and Paris, will exhibit with their complete line of Eye, Ear, Nose and Throat instruments a new model Ophthalmometer, a Trial Frame of fundamentally different design, the Morton Perimeter with which examinations may be made in much quicker time and an Eye Magnet that operates on the alternating current—something hitherto considered impossible. They will also show a complete line of equipment for specialists. Spaces 8-9-10.

V. Mueller & Co., Chicago, will occupy Spaces 145-146-147-148 with a complete display of surgical instruments and apparatus. A number of new patterns of instruments; a series of operating lamps for both office and hospital use; the Taylor Tidal Irrigator, for irrigating wounds, which device has caused much favorable comment; electrically lighted instruments for diagnostic and operative purposes, electrically operated surgical engines, thermophores, anaesthesia and aspirating equipment in a variety of models will be featured.

The F. H. Thomas Company of Boston, a firm well-known to doctors and hospitals throughout New England, will have a representative

(Continued on Adv. page 44)

List of Exhibitors

	Aisle and Space No.
Abbott Laboratories, Chicago	B-C—21
Aloe Co., A. S., St. Louis	E—141-142
Amb. Pneu. Sp. Mfg. Co., Chicago	K—110
Am. Inst. of Med., New York	C—34
Am. Surg. Spec. Co., Chicago	B—11
Amer. Surg. Inst. Co., New York	Bal. 174
Anatomik Footw'r Co., Elizabeth, N. J.	M—131
Appleton & Co., D., New York	B—20
Armour & Co., Chicago	C—29
Astier Laboratories, Paris, France	H—68
Bard Parker Co., New York	H—61
Battle Creek Def. Appl. Co., Battle Creek	L—4
Baum Co., Inc., W. A., New York	C—35
Bausch & Lomb Opt. Co., Rochester, N.Y.	I—72-73
B. B. Culture Lab., Yonkers, N.Y.	D—41
Becton, Dickinson & Co., Rutherford, N.J.	H—62
Berger Bros. Co., The, New Haven, Conn.	L—7
Bethlehem Labs., Bethlehem, Pa.	L—122
Betz Co., Frank S., Hammond, Ind.	H—69-70
Blakiston's Son & Co., P., Philadelphia	E—140
Brady & Co., Geo. W., Chicago	K—113
Burdick Cabinet Co., Milton, Wis.	G-H—52
Buzzell-Flanders Co., Boston	G-H—51-58
Calco Chemical Co., New York	I—91
Campbell Elec. Co., Lynn, Mass.	J-K—96-111
Carnes Artificial Limb Co., Minneapolis	L—121
Castle Co., Wilmot, Rochester, N.Y.	K—112
Churchill & Alden Co., Brockton, Mass.	J—98
Clinical Film Co., New York	Bal. 154
Colgate & Co., New York	L—123
Cummings Chem. Co., Lansdowne, Pa.	L—3
Davis Co., F. A., Philadelphia	J—90
Dayton Photo Products Co., Chicago	E—142A
Dennison Mfg. Co., Framingham, Mass.	H—60
DeVilbiss Mfg. Co., The, Toledo, O.	I—79
De Zeng Standard Co., Camden, N.J.	J—92
Dermatological Res. Lab., Philadelphia	D—40
Diarsenol Co., Inc., Buffalo	H—67
Dry Milk Co., The, New York	I—74
Earnshaw Knitting Co., Chicago	K—114
Eastman Kodak Co., Rochester, N.Y.	M—125-126
Edmands, Walter, Boston	G—48
Engeln Electric Co., Cleveland	H—57
Fischer & Co., Inc., H. G., Chicago	I—86-87
Foregger Co., The, N. Y.	J—97
Fraas Co., Inc., Aug. E., New York	Bal. 157
General Optical Co., Mt. Vernon, N.Y.	J—101
General X-Ray Co., Boston	Bal. 170-171
Green & Bauer, Inc., Hartford, Conn.	L—5
Hanovia Chem. & Mfg. Co., Newark, N.J.	C—28
Hansen's Lab., Chr., Little Falls, N.Y.	H—59
Hardy & Co., F. A., Chicago	J & K—100
Hindle, Chas. F., Ossining, N.Y.	L—2
Hoeber, Paul B., New York	A & B—13
Holmes Co., T. J., Boston	Bal. 155
Horlick's Malted Milk Co., Racine, Wis.	J—88
Horn & Brother, Wm. H., Philadelphia	L—120
Hospital Social Service, New York	Table space
Hygienic Fibre Co., New York	Bal. 160
Hynson, W'ste't., Dunning, Balto.	B & C—22-27
Int. Jour. of Gastro-Enterology, N.Y.	Bal. 158
Intern. Surg. Instr. Co., New York	Bal. 159
Jaeckh Mfg. Co., The, Cincinnati	M—127
Jaeger-Bigelow Co., Boston	Bal. 166
Johnson & Co., Mead, Evansville, Ind.	D & E—42
Kayden, Popper & Klein, New York	K—115
Kelly Koett Mfg. Co., Covington, Ky.	G—53-54
King Optical Co., Julius, New York	I—80
Klett Mfg. Co., New York City	Bal. 172
Kloman Instr. Co., Washington, D.C.	L—1
Kny-Scheerer Corp., New York	J—94-95
Kolynos Co., The, New Haven, Conn.	J—102-103
Lea & Febiger, Philadelphia	A & B—12
Leitz, Inc., E., New York	H & I—66
Leonard, W. H., Boston	E—139
Linen Underwear Co., Greenwich, N.Y.	K—118
Lippincott Co., J. B., Phila.	M—133-134-135
Lowy Laboratory, Inc., Newark, N.J.	I—85
Lungmotor Co., Boston	I—71
MacGregor Inst. Co., Needham, Mass.	G—50
Macmillan Co., New York	J—93
Mahady Co., E. F., Boston	I—82
Maltbie Chemical Co., Newark, N.J.	B—19
Maltine Co., The, Brooklyn	I—78
Mass. General Hospital, Boston	B—17
McIntosh Bat. & Opt. Co., Chicago	L—119
Mellin's Food Co., Boston	K—116-117
Merrell-Soule Sales Corp., Syracuse, N.Y.	G—47
Metz Labs., Inc., H. A., New York	B—18
Meyrowitz, Inc., E. B., N.Y.	K & L—8-9-10
Miracle Artificial Arm Co., Chicago	K—110
Morse-Chapman Company	Bal. 168
Mosby & Co., C. V., St. Louis	A & B—14
Mueller & Co., V., Chicago	E—145-146-147-148
Nelson & Sons, Thos., New York	M—129-130
New York Post-Grad. Med. School	Bal. 163
Norton Company, The John, Columbus, O.	J—99
Oxford University Press, New York	E—140
Partridge & Co., Boston	Bal. 167
Patterson Screen Co., Towanda, Pa.	E—143
Picker, James, New York	Bal. 164
Pierce, Harvey R., Philadelphia	Bal. 169
Prior Co., Inc., W. F., Hagerstown, Md.	C—31
Radium Chemical Co., Pittsburgh	J & K—104
Radium Co. of Colo., Denver	B & C—23-24-25
Radio Chemical Corp., New York	L—6
Rebman Company, New York	M—124
Safety Anaes. App. Con., Chicago	K—109
Sanborn Company, Boston	C & D—32-33
Saunders Co., W. B., Philadelphia	A & B—15
Scientific Apparatus Co., Hoboken, N.J.	Bal. 156
Smith, Inc., Upsher, Minneapolis	M—132
Sorenson Co., C. M., N.Y.	C & D—36-37-38
Southworth Co., Troy, N.Y.	M—128
Spencer Lens Co., Buffalo	Bal. 173
Squibb & Sons, E. R., N.Y.	I & J—83-84-91
Standard X-Ray Co., Chicago	Bal. 161-162
Stover & Bean Co., Lowell, Mass.	H—64
Surgeons' & Physicians' Sup. Co., Boston	G—49
Taylor Inst. Co., Rochester, N.Y.	H—55-56
Thomas Co., F. H., Boston	G—44-45-46
Thompson Plaster, Leesburg, Va.	I—86-87
Thoro Corporation, The, Chicago	E—144
Toledo Technical Appl. Co., Toledo	C—26
Victor X-Ray Corp., Chicago	K—105-106-107
Welch Grape Juice Co., Westfield, N.Y.	E—138
Weinsfeld Bros., New York	L—4
Waite & Bartlett Mfg. Co., Long Isl. City	J—89
Wappler Elec., L. I. City	H & I—65-75-76
Wiggins Son Co., H. B., Bloomfield, N.J.	L—3
Wilson Laboratories, Chicago	H—63
Wilson & Wilson, Boston	I—77
Winthrop Chem. Co., New York	I—77
Wood & Co., Wm., New York	C—30
Woolf Inst. Corp., New York	L—118
Yawman & Erbe Mfg. Co., Rochester, N.Y.	D—39
Year Book Publishers, Chicago	K—108